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Institute Report Projects Oil Industry 25 to 50 Years Into Future

By V. B. Guthrie
N. P. N. Managing Editor

A VISION of the demands that will be put upon the oil industry, and how they will be met, 25 years hence—a period which the majority of men now actively engaged in this industry will live to see realized—is contained in the report of the special American Petroleum Institute "Committee of Eleven" to the Federal Oil Conservation Board. In fact, demand for principal products is estimated up to 1975.

The report, some 260 book pages in length, was presented to the board at Washington, Aug. 5 by President J. Edgar Pew of the institute and made public a few days later. It is the six-month task of the committee, made up of leading oil men of the country, in the preparation of which the views of 250 qualified persons both within the industry and outside, were secured on the various phases of future oil supply and demand it takes up. It may aptly be referred to as a good cross-section of the thought and study of the active oil industry on this question.

For the federal board it should be taken as the best answer that is within man's present knowledge to give on the point of future oil reserves for the nation. If the facts and data it sets up are accepted by the board, the report about dismisses the need for further functioning by that body, as far as any steps on its part or that of any other body are necessary to avoid a future shortage of oil.

While the committee takes the position that future supplies of either crude petroleum or substitutes are ample, it does point out that the cost of producing the next 8,000,000 barrels of oil will be higher than the last. Finding new fields is becoming more expensive; lease bonuses are increasing; scientific investigation is more involved, and drilling to continually deeper depths is being carried on.

The Oil is There

"There is in the ground a large quantity of petroleum; whether we choose to recover it and utilize its production or to develop substitutes for these products is a question of dollars and cents, rather than the existence of the necessary commodity," the committee summarizes its investigation.

THE question of prices is taken up at short length, but the point made, that never in the history of the industry have prices responded to the several prophecies of coming shortages and present prices show no indication of any feeling within the industry on that point.

The industry is characterized as a "finding" industry, with every indication the men and companies participating in it will be as successful in caring for the nation's needs in coming years as in past.

On the question of unit or co-operative development of oil leases to avoid waste of oil or extravagance in development operations, the second main subject with which the oil board has concerned itself, the committee goes into the experience of progressive oil companies and the work of Bureau of Mines engineers to show there has been no waste of oil under present individual and highly competitive drilling of oil leases and that in fact a greater proportion of the oil in the sand has been recovered by such methods than could have been recovered by delayed drilling programs.

The portion of the public that reads the report—and the institute should make it as available to as much of the public as possible—will get a true and fairly detailed picture of the many ramifications of the oil industry, its magnitude, and its growth, the most of it in language the layman can readily understand.

For the man that reads the report because it concerns the industry in which he makes his daily bread, tucked away in its tables, and data and tersely phrased facts, is the romance of an industry that has come from nothing less than 75 years ago, until now it employs 750,000 persons and uses nine billions in invested capital, looking ahead 25 years and endeavoring to anticipate the industrial burden it will be called upon to carry. Here are a few bits of detail from that picture of the future, as sketched, not by someone skilled in writing for narrative or inspiration, but by hard-headed executives, making a survey of their industry and projecting it 25 years ahead:

In 1950, with a population of nearly 149,000,000 individuals in this country, there will be 37,200,000 passenger cars in use. This will be considerably more than one car to each family, counting four individuals to the family. It will be more than double the present number of passenger cars, trucks and motorcycles in operation. Trucks will show an even greater percentage of growth than passenger cars and reach a total of 6,000,000. Motorboats, motorcycles and airplanes, it is estimated, will increase from 436,000 in 1924 to 1,820,000 in 1950. The total number of automotive engines, presumably gasoline consuming, will be 44,990,000.

With the same average gasoline consumption as for the past few years for all types of automotive engines, found to be 10.1 barrels, 25 years hence the call on gasoline to keep the motor ve-

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hicles running and the airplanes aloft would be 455,549,000 barrels. The gasoline consumption of the country in 1924 was 185,000,000 barrels.

But leading automotive experts of the country believe that greater economy in gasoline consumption will have been attained before 1950, and that the miles per gallon of cars and trucks will be doubled, and that small passenger cars will be capable of making 40 miles on a gallon of gasoline.

Less Crude Run to Stills Then

For its part in keeping this huge number of automotive vehicles in operation in 1950 and all the years leading up to it, the oil industry promises, if necessary, great advancement in cracking of heavy oils, fuel oil as well as the present, gas oil and distillates, to the point that the present 33 per cent yield of gasoline from crude may be stretched to 55 per cent, and still a sufficient production of lubricating oils be secured for future needs.

Here is a high light in that picture of the automotive world of 1950 and its enormous appetite for fuel and lubricants. If these improvements in refining and in gasoline economy in engines are achieved, a smaller crude supply would be necessary to fill these needs in 1950 than now. It might be less than 500,000,000 barrels. In 1924 there were nearly 644,000,000 barrels run to stills.

If, improvements in engine design are made, gasoline demand in 1950 might be only 228,000,000 barrels, as against the 455,549,000 barrels if no greater gasoline economy is secured.

Fuel oil comes into the picture also. Normal increase in the demand for this product in the coming 25 years would call for 641,000,000 barrels in 1950. With improvement in refining operations, as described earlier, it is possible that only about a third of such a demand could be met by the output of coke and residue from the then general operations of cracking stills.

However, to offset what might be a shortage here, even though it might be construed as a desirable shortage by those who believe consumption of fuel oil as such is uneconomic, developments comparable to improvement in automobile engine design will have taken place in the power field generally.

Future of Diesel Engine

By 1950, for example, the Diesel engine will be coming to be generally used for generation of electrical power for locomotives—by 1975 it is believed all locomotives will be electric; in factories where hydro-electric power can not then be secured, and for ship propulsion. By 1965 a fully Diesel-driven merchant marine and navy will be achieved. In 1922 1 per cent of merchant ships were Diesel engine operated. The Diesel engine burns in its combustion chamber the entire crude oil content, instead of vaporized gasoline only as in the present gasoline engine.

The economy in use of Diesel engines for ships is seen in the statement that

(Continued on next page)

Summary of Conclusions as Made in Report

1. There is no imminent danger of the exhaustion of the petroleum reserves of the United States.

2. It is reasonable to assume that a sufficient supply of oil will be available for national defense and for essential uses in the United States beyond the time when science will limit the demand by developing more efficient use of, or substitutes for, oil, or will displace its use as a source of power by harnessing a natural energy.

3. Current supply and demand cannot stay in balance, since the amount of both supply and demand are constantly changing. Generally, current supply will exceed or be less than current demand, creating surplus or shortage; either condition will be reflected in price, but price will in time correct either condition.

4. Petroleum recoverable by present method of flowing and pumping from existing wells and acreage thus proven consists of five billion, three hundred million (5,300,000,000) barrels of crude oil.

5. It is estimated that after pumping and flowing there will remain in the area now producing and proved twenty-six billion (26,000,000,000) barrels of crude oil, a considerable portion of which can be recovered by improved and known processes such as flooding with water, the introduction of air and gas pressure and mining, when price justifies.

6. Improved methods of deep drilling below oil sands now producing will disclose in many areas deposits not hitherto available, which will be tantamount to the discovery of new fields. Improved methods of producing have been perfected which will make possible recovery of oil from these lower levels. The limit of deep drilling has not been reached.

7. The major oil reserves of the United States lie in some one billion, one hunded million (1,100,000,000) acres of lands underlain by sedimentary rocks, and not fully explored in which geology indicates oil is possible. With extended search new supplies will be found therein.

8. The Nation has an additional reserve in the vast deposits of oil shale, coal and lignites from all of which liquid fuel and lubricants may be extracted if and when the cost of recovery is justified by the price of these products. These deposits are so huge that they promise, under conservative estimates, an almost unlimited supply.

9. While this report is confined to the petroleum supply and demand within continental United States the importance of imports cannot be ignored. Countries to the south are known to have large petroleum resources, for the output of which the United States is a natural market and the supply therefrom must inevitably have its influence on the consumption of American reserves.

10. The availability of future petroleum supplies from the vast area of land mentioned above depends upon adequate incentives to the exploration which in the past has given the Nation a sufficient supply of petroleum in peace and in war, throughout the history of the oil industry, from its inception in 1859.

There must be:

(a) Security in the ownership of oil lands and of the right to lease.

(b) Conditions of exploration and development by owners or lessees permitting exercise of initiative, liberty of action, the play of competition and the free operation of the law of Supply and Demand.

(c) Prices that will provide a return to producers, refiners, and distributors commensurate to the risks involved and the capital invested.

11. The supply of petroleum will be made to go much further through more efficient utilization. Automotive experts state that the mileage of the motor car per gallon of gasoline may be doubled through structural mechanical changes, when prices justify such changes. Improved mechanics will also result in smaller consumption of lubricants.

12. Through improved methods, principally the process known as "cracking," the refining branch of the industry has already increased the yield of gasoline, now the major product of petroleum. Through further improvements and extensions the supply of gasoline will be augmented still further by the "cracking" of fuel oil. In consequence the supply of fuel oil will be correspondingly diminished, thus eventually removing fuel oil from competition with coal.

13. Waste in the production, transportation, refining and distribution of petroleum and its products is negligible.

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(Continued from preceding page)

a Diesel-equipped vessel will travel three times as far on a given quantity of petroleum as a vessel where the same quantity is burned under boilers to produce steam. Great development in the extension of hydro-electric power installations is foreseen for the next 25 years, which will lessen the demand for fuel oil.

Future Oil Supply

But even with economies in consumption and with great improvements in refining, crude oil in great quantities or its equivalent in substitutes must be found, not only for 1950 but for the 25 years intervening and the years thereafter. Here is where the crude oil is to come from, according to the supply phase of the institute report, bearing in mind that we are now consuming crude oil through refinery stills at the rate of 644,000,000 barrels in 1924.

Of the 658,059 wells drilled in this country since the beginning of the industry, 296,147 are still producing, and the area these wells are draining, or proving beyond doubt for future production, will produce 5,321,427,000 barrels of crude by present producing methods—pumping and flowing. There has already been produced from all wells in this country 7,870,948,466 barrels of oil. This future estimate was made after detailed examination of the performance of every oil field in the country, to give some idea of the thoroughness with which the committee carried on its task.

When production of oil by flowing and pumping in present fields shall have ceased, it is estimated there will remain in these oil deposits some 26,000,000,000 barrels of oil, a good share of which will undoubtedly be recovered in the future. Several methods for such recovery beyond flowing and pumping have already been developed beyond the experimental stage. Some of them the industry has already heard considerably of, such as water flood-

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ing, use of compressed air and gas, and more lately mining. Production by such methods, the committee points out, must be spread over years.

As an aside, the committee points out the production of natural gasoline from already proven areas will equal the production of straight-run gasoline from an additional 1,000,000,000 barrels of crude. Thus, it points out, there is a total of 32,000,000,000 barrels of crude in sight in known fields, with no allowance for a single barrel of oil from fields yet to be discovered.

New Sands and New Fields

In this category of fields yet to be discovered is placed the likelihood of new sands being discovered in present producing areas, even in the older territories of the eastern fields. Deeper drilling and improved drilling technique will allow the exploration of these districts for deeper producing strata, and evidence is at hand that reserves may be opened which will greatly increase the petroleum reserves.

With regard to discovery of new producing territory, the committee states that 57 per cent of the total area of the United States is such that new oil fields may be found in it, that is, 1,105,454,000 acres is underlaid by rock structures of the same general character as those which yield petroleum in present fields, which are distributed over this territory."

"Only a very small per cent of this total area will become producing territory, but at intervals, widely spaced, new oil fields may be found," the committee declares. So much for future supplies of crude petroleum to be taken from the ground, to insure needs for 1950 and later.

The study of substitutes is still another phase of the picture. These will come into use only when cost of recovery of gasoline and other products will permit them to be sold in competition with the same products from present sources.

Shale and Coal Reserves

From the data gathered by the Bureau of Mines, U. S. Geological Survey, state geological departments, colleges, private surveys made by oil and other interests, there are total oil shale deposits in this country amounting to 394,000,000,000 tons, from which 108,000,000,000 barrels of crude shale oil may possibly be recovered, based on recovery methods now known. From this crude shale oil, some 25,000,000,000 barrels of motor fuel, both straight-run and cracked products, may be secured.

Still another possible source of petroleum substitutes within this country, is the vast coal deposits. If coal deposits as deep as 6000 feet are worked 3,100,000,000,000 tons would be available to processing to take out liquid by-products before the residue was submitted to power purposes, in the form of coke or like substance. The maximum amount liquid products available from this coal reserve, is placed at 2,000,000,000,000 barrels, figures so large as to be beyond comprehension. However, taking everything into account, the committee estimates the possible commercial recovery from coal suited to that purpose to be somewhere near 525,000,000,000 barrels, and the estimated commercial yield of motor fuel resulting to be 92,000,000,000 barrels.

May Use Lignite

Again deposits in this country of lignite, a fuel intermediate between peat and coal, provide another possible substitute petroleum reserve. Such deposits amount to 986,000,000,000 tons,

(Continued on next page)

Shale Resources

Estimated Quantities of Oil Shale and Shale Oil that may be Recovered, Given by States

State	Oil Shale in 1,000 Tons (Short)	Shale Oil in 1,000 Bbls. (42 Gal.)
1. California	13,939,200	5,575,680
2. Colorado	113,792,000	40,640,000
3. Indiana	69,696,000	13,939,200
4. Kentucky	90,604,800	28,993,536
5. Montana	6,969,600	1,393,920
6. Nevada	7,219	2,165
7. Utah	92,159,000	16,588,620
8. Wyoming	7,176,000	1,291,680
Total	394,343,819	108,424,801

DIVISION CLASSIFICATION PETROLEUM ACREAGE.

Divisions by States	Total Area	Number of Producing Wells	Present Production Per Day	Total Production to Date	Producing Area	Proved Undeveloped Area
	(Acres)		(Barrels)	(Barrels)	(Acres)	(Acres)
Minnesota	52,749,120					
North Dakota	44,917,120					
South Dakota	49,195,520					
Nebraska	49,157,120					
Missouri	43,985,280					
Kansas	52,335,360	18,318	84,200	345,000,000	139,300	175,700
Oklahoma	44,424,960	56,677	495,857	1,640,000,000	374,790	264,000
Total	335,764,480	74,995	580,057	1,985,000,000	514,090	439,700
Kentucky	25,982,720	12,737	22,422	69,673,000	253,344	84,448
Tennessee	26,894,080	32	500	86,000	320	500
Alabama	33,278,720					
North Carolina	31,193,600					
South Carolina	19,516,800					
Georgia	37,929,600					
Florida	37,546,240					
Total	212,341,760	12,769	22,922	69,759,000	253,664	84,948
Arizona	72,931,840					
Colorado	66,526,720	71	968	11,410,000	2,504	3,241
Idaho	53,688,320					
New Mexico	78,485,760	7	500	91,218	640	13,960
Montana	94,078,080	204	8,228	9,631,000	2,390	490
Utah	54,393,600	5	50			
Wyoming	62,664,960	2,480	106,650	198,470,000	55,880	7,368
Nevada	70,841,600					
Washington	44,241,280					
Oregon	61,887,360					
California	101,310,080	11,380	602,000	2,124,066,000	62,229	63,305
Total	761,049,600	14,147	718,391	2,343,668,218	105,647	88,357
Arkansas	33,616,000	3,024	102,900	117,028,928	35,940	4,230
Louisiana	34,645,000	3,527	58,025	316,589,212	50,215	5,670
Mississippi	29,671,000					
Texas	174,334,000	18,506	411,864	885,574,113	162,128	423,000
Total	272,266,000	25,057	572,789	1,319,192,248	248,283	432,900
New York	31,490,560	14,400	4,060	59,808,000	60,000	2,000
Pennsylvania	28,880,640	76,664	20,628	780,318,000	380,000	11,000
West Virigina	15,468,800	19,847	16,230	338,179,000	150,000	10,000
Ohio	26,265,600	39,050	18,621	506,529,000	275,000	20,000
Indiana	23,266,500	2,505	2,564	112,246,000	30,000	3,000
Illinois	36,265,600	16,731	22,030	357,157,000	124,000	12,000
Maine	21,145,600					
New Hampshire	5,978,240					
Vermont	6,120,900					
Massachusetts	5,290,240					
Rhode Island	798,720					
Connecticut	3,177,600					
New Jersey	5,263,360					
Delaware	1,516,800					
Maryland	7,889,280					
District of Columbia	44,800					
Virginia	27,281,280					
Michigan	57,107,200					
Wisconsin	55,882,240					
Iowa	55,934,000					
Total	355,067,960	169,179	84,134	2,153,329,000	1,019,000	58,000
Grand total	1,936,489,800	296,147	1,978,293	7,870,948,466	2,140,684	1,103,905

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from which 70,000,000,000 barrels of liquid products might be obtained, of which 12,000,000,000 barrels could be used for motor fuel.

In summary, the total of the three foregoing forms of substitutes, available against needs of 1950 or any future period, are placed at 4,000,000,000,000 tons, from which 700,000,000,000 barrels of commercially feasible products might be recovered, of which motor fuel might be around 140,000,000,000 barrels.

Bear in mind that the foregoing estimate of both petroleum in the ground and reserves, is limited entirely to resources in the United States. But the certainty of great quantities of crude being imported from Mexico and South American countries, is admitted.

Highly Efficient Industry

Another bit of detail in the picture of 1950 the institute committee has drawn, is something of the improvement of prospecting and operating methods the oil industry itself will bring into play. These will surely have their effect in locating new fields and in the more efficient development of the new fields, as well as an application to present districts.

Improved technique of the oil industry, for estimation of future supplies, cannot be figured in so many million or billion barrels of additional oil, but it undoubtedly will help to swell the total of future recovery.

But today, as the committee points out, such methods as water flooding, compressed air and gas to force the oil from the ground and even mining are used to recover oil from the sand after flowing and pumping have ceased. Progress is being made in the conservation and use of the gas supply as a lifting agent. Edge water flooding is being made to serve the useful purpose of driving the oil into wells.

In prospecting for new fields core drilling is coming into play. Microscopic examination of well cuttings is leading to more definite identification of strata. Research work is being done in correlating underground waters by physical and chemical examination. The use of the seismograph and torsion balance has already been of great service in locating salt domes in the Gulf Coast fields and is considered as applicable to other regions where its methods could be applied to detect buried upheavals and faults obscured at the surface.

In short and finally, the institute committee's report is recommended instead of the services of a specialist in nervous diseases for anyone who has been losing sleep over the future oil resources of the nation.

PRODUCTION AND RESERVES FOR THE UNITED STATES

Areas Within Which Oil Fields may be Found	Unfavorable Areas	Reserve of Producing Wells (Common Methods of Flowing and Pumping)	Reserve of Proved Undeveloped Acres (Common Methods of Flowing and Pumping) (Barrels)		Reserves of Producing and Proved Acres (Common Methods of Flowing and Pumping)	Estimated Amount of Oil Left in Ground Under Producing and Proven Areas After Flowing and Pumping Cease
			Barrels Recoverable Under Present Conditions of Industry	Barrels Recoverable at Some Price		
(Acres)	(Acres)	(Barrels)			(Barrels)	
.....	51,749,120					
41,613,440	3,303,680					
44,182,400	5,013,120					
49,157,120						
19,554,560	24,430,720					
52,020,360	.....	120,380,000	79,610,000	114,511,000	314,501,000	1,539,000,000
41,560,250	2,225,920	572,163,000	123,800,000	343,130,000	1,039,093,000	6,251,000,000
248,088,130	86,722,560	692,543,000	203,410,000	457,641,000	1,353,594,000	7,790,000,000
24,648,064	996,864	78,974,000	.....	.....	78,974,000	446,000,000
25,382,597	1,510,663					
21,471,655	11,807,065					
8,458,240	22,735,360					
10,311,040	9,205,760					
21,107,200	16,822,400					
37,546,240						
148,925,036	63,078,112	78,974,000	.....	.....	78,974,000	446,000,000
.....	.....	2,225,000	46,237,000	.....	48,462,000	179,616,000
237,333,408	316,209,000	1,450,000	11,450,000	.....	12,900,000	38,977,000
.....	.....	5,478,000	4,422,000	.....	9,900,000	58,593,000
.....	.....	.....	.....	.....	500,000	1,500,000
.....	.....	137,671,000	157,879,000	.....	295,550,000	1,482,060,000
8,241,280	56,000,000					
10,755,360	51,132,000					
30,714,548	70,470,000	1,207,048,000	932,939,000	.....	2,139,987,000	12,792,159,000
287,044,596	473,811,000	1,353,872,000	1,152,927,000	.....	2,507,299,000	14,552,905,000
25,575,830	8,000,000	101,000,000	21,150,000	.....	122,150,000	239,179,000
34,589,115	.....	105,520,000	28,350,000	.....	133,870,000	450,459,000
29,671,000						
151,666,892	22,081,980	520,540,000	.....	211,500,000	732,040,000	1,617,614,000
241,502,837	30,081,980	727,060,000	49,500,000	211,500,000	988,060,000	2,307,252,000
10,893,560	20,535,000	15,000,000	1,000,000	.....	16,000,000	100,000,000
10,706,640	17,783,000	80,000,000	6,000,000	.....	86,000,000	520,000,000
7,708,800	7,600,000	43,000,000	5,000,000	.....	48,000,000	193,000,000
23,328,600	2,642,000	110,000,000	10,000,000	.....	120,000,000	209,000,000
21,463,500	1,770,000	10,000,000	1,500,000	.....	11,500,000	41,000,000
32,289,600	3,840,000	100,000,000	12,000,000	.....	112,000,000	235,000,000
.....	21,145,600					
.....	5,978,240					
.....	6,120,900					
.....	5,290,240					
.....	798,720					
.....	3,177,600					
1,235,360	4,028,000					
1,000,800	516,000					
2,439,280	5,450,000					
.....	44,800					
2,221,280	25,060,000					
28,621,200	8,486,000					
3,295,240	32,587,000					
34,690,000	1,244,000					
179,893,860	174,097,100	358,000,000	35,500,000	.....	393,500,000	1,298,000,000
1,105,454,459	827,790,752	3,210,449,000	1,441,337,000	669,141,000	5,321,427,000	26,394,157,000

SOFT COAL

Estimates of the soft coal and lignite in the ground, based on the conclusions of the International Geological Congress in Ottawa in 1913, as reported by American Petroleum Institute committee.

	In Thousands of Tons To 3000 Ft.	To 6000 Ft.
Coal Reserve:		
Semi-bituminous..	45,660,000	45,660,000
Bituminous.....	1,428,700,000	1,650,900,000
Sub-bituminous..	986,900,000	1,431,300,000
Total.....	2,461,260,000	3,127,860,000

Possible Total Liquid Products From Soft Coal

	In Thousands of 42-Gal. Barrels Established Maximum	Established Commercial
Semi-bituminous....	17,400,000	9,200,000
Bituminous	1,260,000,000	304,400,000
Sub-bituminous.....	818,000,000	211,400,000
Total.....	2,095,400,000	525,000,000

Possible Light Motor Fuel From Soft Coal

	In Thousands of 42-Gal. Barrels Established Maximum	Established Commercial
Semi-bituminous....	4,340,000	1,600,000
Bituminous.....	252,000,000	53,300,000
Sub-bituminous.....	136,300,000	37,000,000
Total.....	392,640,000	91,900,000

LIGNITE

Lignite reserves (thousands of tons)...	986,000,000
Possible total liquid products (M. 42 gal. barrels).....	70,500,000
Possible light motor fuel (M. 42 gal. barrel).....	11,700,000

Oil Prices Have Never Responded to Prophecies of Shortage

THAT prices for petroleum products have never responded to the frequently issued reports of coming shortages in supply is pointed out by the American Petroleum Institute committee in the summary of its report. Even now, considering the change in the purchasing power of the dollar, prices for both crude and gasoline are near the average for past years and gasoline in the last quarter of 1924 was cheaper than at any other time since the automobile became a factor. Prices since the early days of the industry have been void of the great fluctuations that might be considered as natural to an industry whose future supplies are never definitely known. The committee reports:

How Price Operates

"The problem of obtaining a sufficient supply of oil to meet the demand has always been one of economics; of price performing its normal function of increasing or decreasing production or consumption—and there has been nothing in the fluctuations of prices or in their general level up to this date to suggest physical exhaustion of supply, requiring the use of substitute or the employment of revolutionary methods of consumption. This has remained true notwithstanding the fact that no one has ever known how much oil there is in the ground, where it is, or when, or at what rate it will be brought forth. Through the mere functioning of price the world, without great difficulty, has increased its production in 25 years from 150,000,000 barrels per year to approximately one billion (1,000,000,000) barrels per year. The United States production in 1900 was 63,620,000 barrels; in 1924, 714,000,000 barrels.

Real Prices are Steady

"The sub-committee bases its conclusion that price and demand have been the dominant factors in bringing about the growth and development of the industry in the following recital of facts: In 1913 the number of automobiles registered in the United States first passed the one million mark. The domestic production of oil in that year was 248,446,000 barrels. The average price of Mid-Continent crude oil was 93.4 cents per barrel. The demand for gasoline from motor vehicles was approximately 10,000,000 barrels. In 1924 the domestic production of crude was 714,000,000 barrels; the gasoline demand 214,000,000 barrels from 16,000,000 motor vehicles and the price of Oklahoma-Kansas crude oil according to the United States Bureau of Labor Statistics was $1.45 per barrel. On April 2, 1925, it was $1.938 per barrel. Making due allowance for the change since 1913 in the purchasing power of the dollar, the average value of Mid-Continent crude oil in 1924 was $0.967 per barrel, and the value of April 2, 1925, was only $1.08 per barrel.

"On the same basis, that is making allowance for the change in the purchasing power of the dollar, the highest value ever commanded by Mid-Continent crude was $1.50 per barrel during 1920. In 1913 the base price for gasoline was 16.8 cents per gallon. Allowing for the change in the purchasing price of the dollar, the average price in 1924 was equivalent to 12 cents in terms of 1913 values, and is now—April 2, 1925—13.1 cents or 22 per cent below its exchange value in 1913. The value of gasoline, therefore, as measured in the quantities of other staple products that could be secured in exchange, was lower in the last quarter of 1924 than at any other time since the automobile became an important factor in the lives of the people of the United States. These facts of record show how little the frequently reiterated prophecies of failing supplies affected prices during the period when many men of eminence in the scientific world predicted "certain decline" of production. These prophecies and estimates were "purely speculative," and subsequent events proved them to be unwarranted."

Loss of Oil in Handling Is 3 1/3% Average

THERE is aways much discussion among companies engaged in various branches of the industry as to losses in handling petroleum products through evaporation, leakage, carelessness and so on. The following tables from the appendix of the American Petroleum Institute's report on future petroleum supply and demand can probably be taken as fair averages. They were secured through inquiries sent out by General Secretary R. L. Welch of the institute.

Responses were received from 16 companies on losses in field storage, transportation, distribution and sales, and from 20 companies on losses at refineries. Figures cover approximately half the oil handled by the industry in 1924, and show a total loss in volume by the companies reporting of 3⅓ per cent average per company. In many cases as many as 25 handling operations from the well to the consumer are necessary, the committee states.

(Figures for companies reporting)

Field Storage and Transportation Losses From Producer to Refiner

All Figures Net Oil at 60° F. Less S. and W. (42 Gal. Barrels)

1. Stocks of crude on hand, Dec. 31, 1923, including producing and pipe line storage but not including crude oil at refinery	129,966,338
2. Stocks of crude on hand, Dec. 31, 1924, as above ..	131,793,168
3. Total deliveries of crude oil to refinery, or otherwise, during period Dec. 31, 1923, to Dec. 31, 1924 ..	351,694,989
4. Barrels loss, to include evaporation and leakage, etc., but not to include losses incurred by fire, floods or other force majeure items	4,040,409
5. Per cent loss, based on total deliveries of crude oil to refinery, or otherwise	1.15

Refineries

All Figures Net at 60° Less S. and W. (42 Gal. Barrels)

1. Total oil run to stills .. In this item include not only crude oil run, but any tops, distillates, or other petroleum products, brought into refinery from outside sources, and run through stills.	364,288,043
2. Per cent loss, based on total quantity run through stills ..... This should cover leakage, evaporation, filling, shipping and filtering losses and losses from stored oil. (It is assumed that still-vent gas is recovered and burned; that coke, if manufactured, is either burned or sold; that acid sludge is recovered and the tar burned or burned without recovery. If any of these are not used, show as a separate loss. This should not include losses incurred by fire, floods, or other force majeure items.)	1.51

Sales and Distribution

All Figures Used to be Net at 60° Less S. and W.

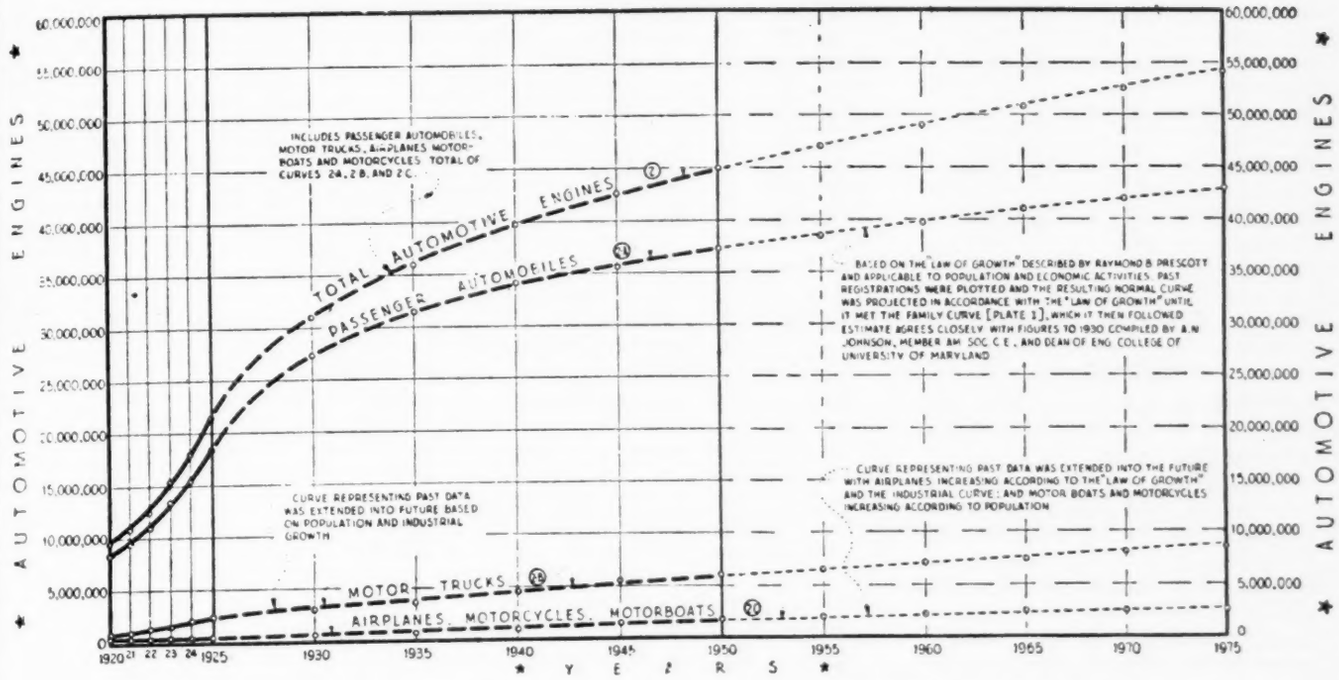
1. Per cent loss, based on volume of deliveries, covering leakage, evaporation, filling, and shipping, etc., but not to include losses incurred by fire, flood, or other force majeure items	*67/100 of 1%

*Arithmetical average.

SEYMOUR, IA.—A bulk station was recently opened at Livania, Mo. by the Hart Bros. Oil Co. Tanks of 25,590 gallons and 17,500 gallons capacity have been installed. Business has started off well, according to the company.

Report on the Probable Future Demand for Petroleum in The United States

Part III of the American Petroleum Institute Committee's Report to the Federal Oil Conservation Board


AUTOMOTIVE ENGINES
AUTOMOTIVE ENGINES
INCLUDES PASSENGER AUTOMOBILES, MOTOR TRUCKS, AIRPLANES MOTORBOATS AND MOTORCYCLES TOTAL OF CURVES 2A, 2B, AND 2C.
TOTAL AUTOMOTIVE ENGINES
PASSENGER AUTOMOBILES
BASED ON THE "LAW OF GROWTH" DESCRIBED BY RAYMOND B PRESCOTT AND APPLICABLE TO POPULATION AND ECONOMIC ACTIVITIES. PAST REGISTRATIONS WERE PLOTTED AND THE RESULTING NORMAL CURVE WAS PROJECTED IN ACCORDANCE WITH THE "LAW OF GROWTH" UNTIL IT MET THE FAMILY CURVE [PLATE 1], WHICH IT THEN FOLLOWED. ESTIMATE AGREES CLOSELY WITH FIGURES TO 1930 COMPILED BY A.N JOHNSON, MEMBER AM. SOC. C.E., AND DEAN OF ENG. COLLEGE OF UNIVERSITY OF MARYLAND
CURVE REPRESENTING PAST DATA WAS EXTENDED INTO FUTURE BASED ON POPULATION AND INDUSTRIAL GROWTH
CURVE REPRESENTING PAST DATA WAS EXTENDED INTO THE FUTURE WITH AIRPLANES INCREASING ACCORDING TO THE "LAW OF GROWTH" AND THE INDUSTRIAL CURVE; AND MOTOR BOATS AND MOTORCYCLES INCREASING ACCORDING TO POPULATION
MOTOR TRUCKS
AIRPLANES, MOTORCYCLES, MOTORBOATS
YEARS

—Estimated Future Automotive Engines in the United States.

THE purpose of this report is to forecast the future demand for petroleum within the continental United States over such a period as present conditions seem to indicate that a reasonable estimate is justified. A study of a number of industries outside of the petroleum industry was made, and several agencies familiar with economic research were consulted. From these consultations and analyses, a period of 25 years was chosen as a safe time over which to make a reasonable estimate, with an additional period of 25 years of a more speculative character as indicated by an extension of the trend of the curves. The latter part of the curves, from 1950 to 1975, is intened for the purpose of indicating relationships rather than specific figures.

When this study was first begun an effort was made to forecast the future demand for a period of 175 years. Owing to so many uncertain factors this proved impracticable and the scope of the report was reduced to a period of 50 years.

In this report the peace time demand for petroleum has been developed by making an independent estimate for each of the three most important products—gasoline or equivalent fuel, lubricating oil and fuel oil.

The crude oil demand has been estimated from the gasoline and lubricating oil requirements only, it being considered that the demand for these two products would be met from the crude first, and any residue incidental to manufacturing could be used as fuel oil. Furthermore, from our present knowledge it would be much easier to find substitutes for fuel oil. Kerosene and other miscellaneous products have been included in the fuel oil. The supply of crude oil from oil shale and coal was taken into account in a very limited manner for the sake of comparison, as will be explained hereafter. No consideration has been given to price, imports or exports, in order to emphasize the position of this country independent of any other resource.

Maximum and Minimum

For the complete solution of the problem implied, the results of this investigation should be correlated with an analysis of petroleum supply. This is not practical, however, due to the impossibility of predicting the rate at which petroleum supply will be withdrawn from the underground reservoirs, or the rates of development of other sources of supply and substitutes. Because of these unknown factors, the problem has been handled by showing two separate conditions of demand throughout the report.

The first, a maximum demand, is based on the continuation of present methods and utilization, with present tendencies toward conversions to electricity and Diesel engines. The second condition assumes immediate changes to all present known possible improvements and increased efficiencies in manufacturing and utilization. Supply has therefore not been considered in the present study, except insofar as a general conception of availability has been found necessary to guide estimates of rates of conversion from one source of energy to another, and in showing to what extent our auxiliary reserves, such as coal and shale, might be depleted by the demand as predicted.

War or other emergency conditions have not been considered in this report. A study of this problem was made, however, by comparing industrial conditions during the last war period with peacetime conditions. There was no apparent abnormal increase in the total power consumed by industries, but there was a redistribution of energy giving to essential industries at the expense of others. It has, therefore, been assumed that in case of emergency the power demand on land could easily be manipulated or curtailed to leave adequate

INSTITUTE'S REPORT TO FEDERAL OIL BOARD

ESTIMATED FUTURE POPULATION AND AUTOMOTIVE ENGINES OF THE UNITED STATES

Year	Population	Number of Families	Total Automotive Engines	Passenger Autos	Motor Trucks	Airplanes, Motorcycles Motor Boats
1920	106,418,000	26,604,000	9,672,000	8,380,000	852,000	440,000
1921	107,833,000	26,958,000	10,880,000	9,483,000	980,000	417,000
1922	109,248,000	27,312,000	13,663,000	10,960,000	1,279,000	424,000
1923	110,663,000	27,665,000	15,526,000	13,540,000	1,553,000	433,000
1924	112,079,000	28,019,000	18,028,000	15,461,000	2,131,000	436,000
1925	113,494,000	28,373,000	21,381,000	18,400,000	2,500,000	481,000
1930	122,397,000	30,599,000	31,018,000	27,400,000	3,000,000	618,000
1935	129,527,000	32,382,000	36,020,000	31,500,000	3,800,000	720,000
1940	136,318,000	34,080,000	39,755,000	34,080,000	4,700,000	975,000
1945	142,712,000	35,678,000	42,608,000	35,678,000	5,500,000	1,430,000
1950	148,678,000	37,170,000	44,990,000	37,170,000	6,000,000	1,820,000
1955	154,100,000	38,525,000	47,008,000	38,525,000	6,500,000	1,978,000
1960	159,230,000	39,808,000	48,984,000	39,808,000	7,000,000	2,176,000
1965	163,900,000	40,975,000	50,808,000	40,975,000	7,500,000	2,333,000
1970	167,945,000	41,986,000	52,461,000	41,986,000	8,000,000	2,475,000
1975	171,654,000	42,913,000	54,060,000	42,913,000	8,500,000	2,647,000

supplies of the desired fuel when it is needed.

Definitions

Barrels of 42 gallons each have been considered in all barrelage computations throughout this report.

In order to void confusion in referring to the various petroleum products, the following definitions are given:

(1) Gasoline or equivalent is any fuel that may be used in any engine similar to the popular gas engine of today, making use of the carburetor principle; for example motor fuel from oil shale or coal, or alcohol.

(2) Lubricating oil throughout the report refers to a lubricant that may be obtained from some form of liquid petroleum, as the natural products from wells, oil from oil shale, or oil from the low temperature distillation of coal.

(3) Fuel oil including Diesel oil, and excepting gasoline, is intended to mean any liquid petroleum suitable as a fuel, derived from natural petroleum, oil shale or coal.

(4) Crude oil, as the term implies, is the raw product which may come from any available source.

The conclusions which may be drawn from this investigation relative to the probable future demand for petroleum in the United States may be briefly summarized as follows: (In this discussion, figures to the nearest hundred thousand only will be quoted.)

Gasoline Requirements

(1) The estimated maximum gasoline requirements based on future growth of automobiles, trucks, aeroplanes, motorcycles, motorboats and industrial use, should increase in accordance with population and industrial growth, from a present consumption of 185,000,000 barrels in 1924 to 315,400,000 barrels in 1930. Due to a slowing up in the increase of automotive engines, it is not expected that there will be as large an increase in consumption for the 10 year period from 1930 to 1940 as probably will be made in the five years previous to 1930.

An estimate of 403,000,000 barrels was made for 1940 or more than double the amount now required. During the next 10-year period an increase of 52,500,000 barrels is expected or a total maximum demand in 1950 of 455,500,000 barrels. Should this trend continue for another 25 years, or until 1975, there will be a consumption of 547,100,000 barrels of gasoline or approximately three times as much gasoline as was consumed in 1924.

The above figures do not take into consideration improvement in utilization or increased efficiency. From reliable sources, however, the present automotive efficiency could be doubled and, if this were effected within the next five years, it would be possible to satisfy the trade in 1930 with less gasoline than was used in 1924.

In 1940, or 15 years from now, an estimated minimum consumption of 201,500,000 barrels would be slightly in excess of present needs. Ten years more would only bring the demand up to 227,700,000 barrels, while during the year 1975 the estimated requirements would reach 273,500,000 barrels or a little less than one and one-half times the consumption for 1924.

Lubricating Requirements

(2) Lubricating oil requirements should be influenced by the growth of automotive engines and industries. From a composite curve composed of these two controlling factors, the estimated maximum lubricating oil requirements should increase from 18,000,000 barrels in 1924 to 28,000,000 in 1930 which would mean an increase of over 50 per cent. An increase of approximately 10,000,000 barrels in the annual consumption is anticipated by 1940 which would result in a consumption of 38,000,000 barrels for that year. It will be noted that no greater gain is expected for this 10-year period than for the five years previous to 1930.

A similar increase for the 10 years following 1940 gives an estimated maximum demand for 1950 of 48,000,000 which means that 25 years from now the annual consumption would be over two and one-half times as much as is now being used. The anticipated trend, if extended to 1975, would give an annual consumption during that year of 68,400,000 barrels which, measured in terms of 1924 consumption, would represent almost four times present-day needs.

With the introduction of improved bearings, more general practice of reclaiming used oil, and other improvements in conservation, the estimated demand should be reduced by one-half. This would result in a minimum requirement for 1930 of approximately 4,000,000 barrels less than is now used.

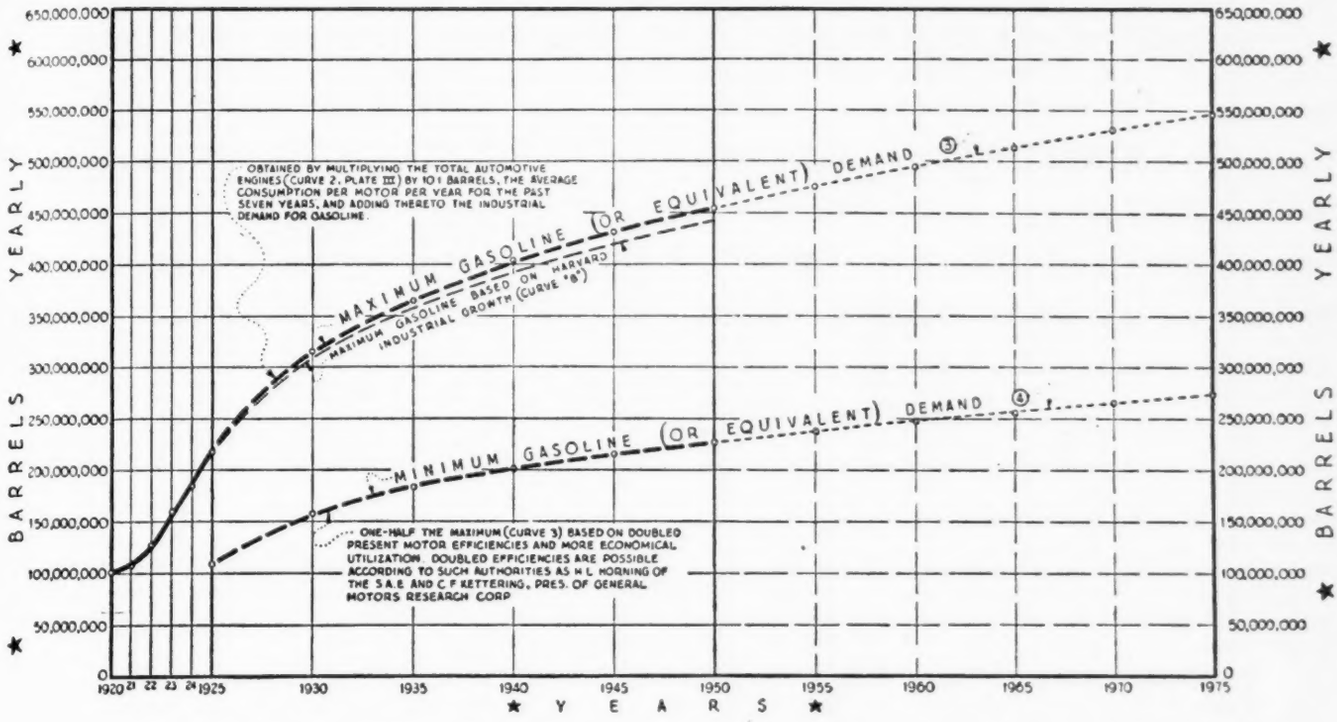
In 1940 the minimum demand would be in excess of the 1924 consumption by only 1,000,000 barrels or would equal 19,300,000 barrels. Ten years in advance would bring the consumption up to 24,000,000 for 1950 or one and one-third times the 1924 figure. If the anticipated rate of increase follows the assumption made, there would be an annual minimum consumption of 34,000,000 barrels in 1975 or less than twice what is now needed to satisfy the trade.

Crude Oil Demand

(3) The crude oil demand has been estimated on the basis of the amount that would be necessary to supply the estimated requirements for gasoline and lubricating oil. Continuing with the present trend and without consideration of well-known possible improvements in refining, it would require a maximum production of over a billion barrels during 1930 to furnish these two products.

In 1940, the maximum demand would be more than double the amount used in 1924 for gasoline and lubricating oil, and in 1950, the requirements will have reached almost one and one-half billion barrels (1,500,000,000). The estimated rate of increase would give an estimated maximum consumption for 1975 of

INSTITUTE'S REPORT TO FEDERAL OIL BOARD


650,000,000
600,000,000
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200,000,000
150,000,000
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0
BARRELS YEARLY
OBTAINED BY MULTIPLYING THE TOTAL AUTOMOTIVE ENGINES (CURVE 2, PLATE III) BY 101 BARRELS, THE AVERAGE CONSUMPTION PER MOTOR PER YEAR FOR THE PAST SEVEN YEARS, AND ADDING THERETO THE INDUSTRIAL DEMAND FOR GASOLINE
MAXIMUM GASOLINE (OR EQUIVALENT) DEMAND ③
MAXIMUM GASOLINE BASED ON HARVARD INDUSTRIAL GROWTH (CURVE "B")
MINIMUM GASOLINE (OR EQUIVALENT) DEMAND ④
ONE-HALF THE MAXIMUM (CURVE 3) BASED ON DOUBLED PRESENT MOTOR EFFICIENCIES AND MORE ECONOMICAL UTILIZATION. DOUBLED EFFICIENCIES ARE POSSIBLE ACCORDING TO SUCH AUTHORITIES AS H. L. HORNING OF THE S.A.E. AND C. F. KETTERING, PRES. OF GENERAL MOTORS RESEARCH CORP.
1920 21 22 23 24 1925 1930 1935 1940 1945 1950 1955 1960 1965 1970 1975
YEARS

-Estimated Future Gasoline Demand in the United States in Barrels of Forty-two (42) Gallons Each.

1,800,000,000 barrels or practically three times the amount used in making gasoline and lubricating oil in 1924.

Fortunately, when economic conditions permit, there are possible methods known at the present time in the manufacturing processes which will result in a greater yield of light products from the crude than is now being obtained. Taking these improvements into consideration, results are obtained that are much more favorable than those just cited.

In 1930, if all improvements were put into universal practice, it would be possible to obtain gasoline and lubricating oil from a quantity of crude slightly over one-half of what was used in 1924 for this purpose. The estimated minimum requirement for 1940 would reach 430,700,000 barrels or a little over two-thirds of present requirements, while in 1950 the demand would be 490,000,000 barrels, which is still 125,000,000 barrels less than the present-day needs.

The amount of crude required for gasoline and lubricating oil would approach the present-day demand for crude for this purpose at about 1975, with an estimated minimum consumption of 598,500,000 barrels.

Fuel Oil Demand

(4) The demand for fuel oil has been approached from two angles; first, by assuming that it would be forced by economic pressure to conform to the quantity of residuum left from the manufacture of gasoline and lubricants; and second, by considering the predicted growth of industrial uses to which fuel oil is peculiarly adapted as a source of energy.

The fuel oil requirements for the future are problematical, due to the fact that ready substitutes are always available to replace this source of power whenever such replacement becomes economically practicable. It is quite evident that, with the improvement in refinery practice, the volume of resultant residue or fuel oil will become less and less until this source of fuel will not be adequate to satisfy the demand on a price basis competitive with coal. This will lead to the gradual conversion to other fuel, particularly coal, or to other sources of power—without inconvenience to the public; however, it is important to know that even under the highest known efficiency in refinery operations at this time, there would be more than sufficient residue which could be used as fuel to take care of the maximum requirements of the U. S. Navy and merchant marine and a demand restricted to 5 per cent of the estimated maximum industrial needs.

The consumption of fuel oil is now approximately 390,000,000 barrels annually which is estimated will increase to 455,000,000 barrels in 1930 as a maximum estimate

During the next 10-year period or until 1940, a slower rate of increase is anticipated than during the previous five-year period, due to conversions to other sources of power and changes in mechanical equipment, which results in an estimated maximum consumption in 1940 of 573,000,000 barrels. For the year 1950, 25 years from now, a maximum demand of 641,000,000 barrels has been predicted, or slightly over one and one-half times present-day needs.

If the present tendency toward conversion to other sources of power and changes in mechanical equipment resulting in higher efficiency continue, during the year 1975 there would be a maximum consumption of 840,000,000 barrels, which is more than twice the requirement at the present time.

Considering only that use for fuel oil for which it is manifestly far superior to any other known fuel at the present time, namely, the U. S. Navy and the merchant marine, it is estimated that the maximum demand for ocean transportation will increase to 67,000,000 barrels annually in 1930, reaching a peak in 1940 with a consumption of 75,000,000 barrels. Thereafter, due to conversion to more efficient mechanical equipment, it is expected that the consumption will become gradually less. For this reason, the maximum requirement in 1950 would be 71,000,000 barrels or approximately only 15,000,000 barrels above the present demand.

At the rate predicted conversion to more efficient equipment would not be completed until around 1960 which would give a low figure in consumption, probably less than actual requirements at the present time. After this, the demand would be expected to increase, giving a maximum consumption in 1975 of 68,000,000, barrels, which indicates that throughout the entire 50-year period,

INSTITUTE'S REPORT TO FEDERAL OIL BOARD

Estimated Future Fuel Oil Demand in the United States

(Figures in Barrels of 42 Gals.)

Year	Maximum Fuel Oil Demand	Restricted Land Use, 100% Navy and Merchant Marine	U. S. Navy and Merchant Marine
1920	274,000,000		
1921	274,000,000		
1922	324,000,000		
1923	395,000,000		
1924	391,000,000†		
1925	374,000,000	63,000,000	57,000,000
1930	455,000,000	75,000,000	67,000,000
1935	524,000,000	83,000,000	74,000,000
1940	573,000,000	86,000,000	75,000,000
1945	613,000,000	86,000,000	74,000,000
1950	641,000,000	83,000,000	71,000,000
1955	679,000,000	77,000,000	64,000,000
1960	726,000,000	70,000,000	56,000,000
1965	762,000,000	76,000,000	62,000,000
1970	816,000,000	81,000,000	66,000,000
1975	840,000,000	83,000,000	68,000,000

†Preliminary

Estimated Future Lubricating Oil Demand in the United States

(Figures in Barrels of 42 Gals.)

Year	Maximum Lubricating Oil Demand	Maximum Automotive Lubricating Oil Demand	Maximum Industrial Lubricating Oil Demand	Minimum Lubricating Oil Demand
1920	14,726,000	5,803,000	8,923,000	
1921	12,625,000	6,528,000	6,097,000	
1922	14,955,000	7,598,000	7,357,000	
1923	17,618,000	9,315,000	8,303,000	
1924	18,011,000	10,817,000	7,194,000	
1925	20,428,000	12,828,000	7,600,000	10,214,000
1930	28,311,000	18,611,000	9,700,000	14,155,000
1935	33,612,000	21,612,000	12,000,000	16,806,000
1940	38,653,000	23,853,000	14,800,000	19,326,000
1945	43,365,000	25,565,000	17,800,000	21,681,000
1950	47,994,000	26,994,000	21,000,000	23,997,000
1955	52,202,000	28,202,000	24,000,000	26,101,000
1960	56,590,000	29,390,000	27,200,000	28,295,000
1965	60,584,000	30,484,000	30,100,000	30,292,000
1970	64,477,000	31,477,000	33,000,000	32,238,000
1975	68,436,000	32,436,000	36,000,000	34,218,000

there may not be any very great change in the demand over present requirements by the U. S. merchant marine and the Navy.

Shale Oil Reserves

(5) While this report has to deal only with the demand for petroleum, it is of interest for comparative purposes to note what effect the estimated demand for gasoline or equivalent fuel will have toward using up the reserves of shale on the assumption that other sources of supply were immediately cut off.

With the figures furnished by the "Supply group" of the "Committee of Eleven" of the A. P. I. on the estimated supply of shale and recoverable light motor fuel as a basis, computations have been based on a yield of three gallons of motor fuel per ton of shale which show that during the next 25 years, the estimated maximum demand for gasoline or equivalent fuel could be supplied and the shale reserves depleted only 33 per cent. The computations show further that by the end of the year 1975 approximately 78 per cent of the shale reserves would have been used up during the fifty-year period.

If any analysis is made on the basis of a six-gallon yield per ton of shale, it is estimated that, at the end of 1950, the shale oil reserves would be depleted 16.5 per cent and at the end of a 50-year period or 1975, 39 per cent of the estimated reserves would be used up which still leaves a considerable portion for further exploitation.

In addition to shale, there is also the possibility of coal to consider as a source of fuel. From the figures given by the "Supply Group" of the A. P. I. on the estimated reserves of coal, with the crude oil and light motor oil obtainable therefrom, computations have been made to indicate the rate of depletion of these reserves for the next 50 years, provided this were the only available source for petroleum supplies.

It is found that, on the basis of the predicted maximum demand for all fuels and lubricating oils, only 9 per cent of the coal would be consumed by 1950 and at the end of 1975, 21 per cent would have been used. This rather emphasizes the magnitude of these potential reserves.

Predictions

In general, all predictions are considered in two phases: first, that in which growth is determinable by extending present trend; and second, that in which growth is a function of population.

Forecasts during the first phase are based upon actual past records and present trends. During the second phase the extension of this trend is made to tend toward the population growth rate.

Population is, therefore, not only the dominant influence throughout most of the 50-year period considered, but fortunately is also the thing of which we can be most certain in the future.

Next in importance to population growth, as a determinant of all other development trends, is the growth of our combined industries. For this prediction, the actual trend for the past 100 years can be projected ahead through the first forecasting phase, and then modified according to fairly well-established influences of population, trend of exports and imports, and trend of per capita wealth of the nation. In this we can be more or less guided by the industrial history of European countries 100 to 150 years farther along than we are in the cycle of national development. All other industries and major activities are also ultimately subordinate to these two great factors in national development.

In general, throughout the report, full advantage has been taken of all available forecasts germane to the problem, and wherever there was considerable difference between the results arrived at by an independent analysis, and those calculated by outside authorities, the method which would give the largest consumption was chosen. This was done in order to secure figures that would meet the highest reasonable expectations.

Those particular phases of the problem which can be developed as some

Estimated Future Crude Oil Demand to Supply Estimated Requirements of Gasoline and Lubricating Oil in the United States.

(Figures in Barrels of 42 Gals.

Year	Maximum Crude Demand	Minimum Crude Demand
1920	446,859,000	
1921	456,643,000	
1922	515,654,000	
1923	554,377,000	
1924	615,860,000	
1925	716,849,000	232,771,000
1930	1,036,253,000	335,427,000
1935	1,201,609,000	389,633,000
1940	1,324,023,000	430,729,000
1945	1,417,699,000	462,919,000
1950	1,496,506,000	490,574,000
1955	1,563,293,000	514,261,000
1960	1,629,020,000	537,786,000
1965	1,689,542,000	559,405,000
1970	1,744,385,000	579,234,000
1975	1,797,439,000	598,583,000

Estimated Future Gasoline Demand in U. S.

Figures, in Barrels of 42 Gals. correspond to curves on accompanying chart.

Year	Maximum Gasoline Demand	Minimum Gasoline Demand
1920	101,207,000	
1921	107,488,000	
1922	127,907,000	
1923	159,172,000	
1924	185,281,000	
1925	218,215,000	109,107,000
1930	315,444,000	157,722,000
1935	365,780,000	182,890,000
1940	403,044,000	201,522,000
1945	431,560,000	215,780,000
1950	455,549,000	227,774,000
1955	475,880,000	237,940,000
1960	495,888,000	247,944,000
1965	514,311,000	257,155,000
1970	531,006,000	265,503,000
1975	547,156,000	273,578,000

INSTITUTE'S REPORT TO FEDERAL OIL BOARD

function of population or industrial growth rest upon a reasonably sound basis; on the other hand, predictions which involve conversion from one form of energy source to another, and are further complicated by the influence of supply and demand on price, must be considered highly conjectural.

Decreasing the Demand

It is not believed that a report of this kind would be complete without a few suggestions as to ways of effecting savings in the consumption of petroleum. Those which follow by no means exhaust the possibilities, but are selected for their outstanding importance and unquestionable practicability.

(1) Educate the public to more efficient use of fuel in present equipment, so that equal quantities of fuel will deliver more work.

The low prices that have held for fuels, both gasoline and fuel oil, in recent years, have encouraged wasteful tendencies in the habits of the consuming public. The average motorist pays comparatively little attention to the actual gasoline mileage obtained due to the proportionately small part the item of fuel cost plays in his operating expenses; but were proper investigation made, a very simple adjustment in his fuel mixture might be the means of saving millions of gallons of this fuel for the year.

The results of tests made by the Bureau of Mines have shown that the average motor vehicle wastes approximately 30 per cent of the heat value of the fuel used, mainly due to improper carburetor adjustment. In one set of tests made by the Bureau, based on exhaust gas analysis, it was found that the increased gasoline mileage due to proper carburetor adjustment ranged from 36 per cent to 106 per cent. A similar saving can be obtained in the use of fuel oil by adjusting the burner to use the proper amount of air. Savings such as these will extend our potential supply over a correspondingly longer period of time.

(2) Improve present equipment and create new equipment to give higher efficiency in order to conserve fuel.

The automobile engine of today converts only about 5 per cent of the fuel energy consumed into actual performance, the balance being consumed in overcoming friction, wasted heat, etc., having to do with the mechanical working of the machine. A broad field for conservation, therefore, presents itself along lines of improvements in this engine, or the invention of new machines as substitutes which will operate at higher efficiency. In some instances, this is being practiced to-day in other directions by the substituting of motor ships for steamships, resulting in a vast saving in the consumption of fuel oil. This not only applies to machinery which uses petroleum products for fuel, but also to coal burning equipment. If fire boxes and boilers can be improved so as to deliver a higher efficiency when burning coal, the replacing of oil fuel by coal fuel will be made that much easier. The petroleum conservation program, therefore, should be materially benefited by any improvements made in coal burning equipment.

(3) Encourage more general use of Diesel engine.

The Diesel engine promises to be one of the most effective developments in prolonging the life of our petroleum supply. This type of engine, if successfully developed to take the place of our present popular gasoline engine by the elimination of excessive weight, increased flexibility in handling, etc., would have the effect of multiplying the available supplies of motor fuel six times, provided that the motor fuel used was extracted from some form of crude. The popular gas engine now utilizes about 25 per cent of the crude, whereas the Diesel engine would utilize 100 per cent of the crude, and the gas engine has only approximately two-thirds the thermal efficiency of a Diesel engine.

(4) Increased price of petroleum products will:

(a) Eliminate waste in consumption

(b) Prevent use of fuel oil in competition with coal or other means of securing power, such as electricity, etc.

The current prices of petroleum, to a great extent, appears to have a direct bearing on conservation of the products, as well as of the crude itself. With the price sufficiently high, the consumer will devote more attention to possible ways of reducing waste in his operations, whereas, with low prices he considers this factor as negligible from a cost viewpoint.

As long as fuel oil sells at a low figure, many industries which should be using coal as fuel will use fuel oil in preference, due to the ease in handling, etc. Under present economic conditions this cannot be avoided. Should the law of supply and demand ultimately cause an upward revision in prices, the effect produced will be not only to limit competition with cheaper fuel, but to bring into use other fuels.

Personnel of Committee

The American Petroleum Institute report bears the signatures of the following men who are members of the special committee of eleven appointed last spring to investigate and report on future petroleum demand and supply. They called into service some 250 experts in various lines, both within and without the industry:

J. Edgar Pew, president, American Petroleum Institute, New York; vice-president, Sun Oil Co., Dallas, Texas.

E. W. Marland, president, Marland Oil Co., Ponca City, Okla.

D. M. Folsom, director, General Petroleum Corp., San Francisco.

E. T. Wilson, chairman of the board, Continental Oil Co., Denver.

K. R. Kingsbury, president, Standard Oil Co., (California), San Francisco.

George S. Davison, president, Gulf Refining Co., Pittsburgh.

W. S. Farish, president, Humble Oil & Refining Co., Houston.

J. C. Donnell, president, Ohio Oil Co., Findlay, O.

W. N. Davis, president, Mid-Continent Oil & Gas Association; vice president, Phillips Petroleum Co., Bartlesville, Okla.

Frank Haskell, president, Tidal Oil Co., New York.

R. L. Welch, general secretary, American Petroleum Institute, New York.

Marketing Summary

Mid-Continent—Gasoline prices cut sharply and then advanced but market is generally quiet. Kerosene, gas oil, and fuel oil are firm to strong. Natural gasoline weaker.

Chicago—Gasoline prices lower. Kerosene, distillates and fuel oil stronger. Gas oil steady.

Gulf Coastal—Lubes cheaper following crude price cut.

Pennsylvania—Gasoline cheaper. Kerosene steady. Fuel oil stronger. Neutrals firm in some quarters; soft in others. Cylinder stocks soft. Wax strong.

New York Export—Gasoline, bunker and gas oils, and lubricants weak. Kerosene inquiries increase, prices steady. Wax stronger.

New Orleans Export—Wax stronger. Other products quiet with gasoline prices sagging.

OKMULGEE.—J. W. McCulloch, of Okmulgee former active vice-president and general manager of the Independent Oil & Gas Co. and now head of his own producing company, accompanied by his wife is spending several weeks in the Hawaiian Islands.

FORT COLLINS, COLO.—Cafeteria service at gasoline pumps, which is a new departure in this territory, is proving successful with The Starkey Gas & Supply Co. of this city. The company has installed 14 automatic self-serve pumps in northern Colorado, which seem "to take well" with consumers.

National Petroleum News

Compilation Of Mid-Continent Refinery Operations

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124 Refiners Reduce Still Runs; Draw on Stocks of Heavy Oils

By Fast Wire Service

TULSA, Aug. 11

BY reducing their throughput of raw materials during the first week in August refiners in the Mid-Continent field were able to keep gasoline stocks from increasing and make healthy reductions in stocks of kerosene, gas and fuel oils. Reports from 124 refiners with a daily still capacity of 456,800 barrels, showed a reduction in still charges of 8000 barrels daily average for the week ended Aug. 7 as compared with the last week of July.

It has been expected in some quarters that the reduction in runs would amount to around 10 per cent but reports submitted to National Petroleum News showed a reduction of only 2.1 per cent from the previous week's runs.

The small reduction was because Oklahoma refiners increased their still charges 8000 barrels daily average while other areas were making a reduction of approximately 16,000 barrels in the daily average. A study of the tables, however, will show that the Oklahoma refiners apparently were running a large part of their throughput to semi-refined stocks since production of finished goods was slightly less than in the previous week.

Kansas refiners showed the largest decrease in their scale of operations. The 23 plants in that state cut runs 14 per cent or nearly 13,000 barrels daily average to an average of 79,092 barrels. During the last few weeks Kansas refiners have been running close to their rated capacity.

Shipments of gasoline were slightly less than in the previous week but production decreased 2,600,000 gallons so that the two virtually balanced. The increase in gasoline stocks amounted to only 110,000 gallons in the entire field bringing the total at all reporting plants to 63,233,455 gallons. Kansas refiners reduced their stocks 1,600,000 gallons. North Louisiana-Arkansas plants showed a reduction of a half million gallons. Oklahoma refiners increased their inventories 1,500,000 gallons. North Texas plants showed an increase of roundly 600,000 gallons.

With the exception of north and central Texas every area included in the weekly survey showed a reduction in kerosene stocks. The total reduction was a million gallons bringing stocks down to 21,354,322 gallons.

Shipments of gas and fuel oil were 46,300,872 gallons while production for the week at all plants was 43,966,983 gallons. Stocks were reduced 2,300,000 gallons to 172,437,602 gallons. The stock reduction was well distributed through the field except that Louisiana - Arkansas refiners showed an accumulation of 400,000 gallons.

At the rate of shipments maintained during the week stocks of gasoline on Aug. 8 represented 14 days' supply, kerosene 20 days', and gas and fuel oil 26 days'.

Summary for Month

Production and shipments, all reporting refineries for four weeks ended Aug. 7. Change in stocks figured from July 10.

Gasoline

	Gallons
Production	138,160,564
Shipments	139,075,019
Net change in stocks	—914,455
Ratio sales to production	100.7%

Kerosene

Production	26,250,765
Shipments	28,147,526
Net change in stocks	—1,896,761
Ratio sales to production	107.2%

Gas and Fuel Oils

Production	184,170,007
Shipments	177,321,015
Net change in stocks	+6,848,992
Ratio sales to production	96.3%

MOBILE, ALA.—Huxford Oil Co., Inc., has succeeded H. W. Patterson Oil Co. of this city.

Mid-Continent Refinery Operations Week Ended Aug. 7 (By Fast Wire)

	Kansas	%Change Previous Week	Oklahoma	%Change Previous Week	No. & Cent. Texas	%Change Previous Week	No. La.-Ark.	%Change Previous Week	Total	%Change Previous Week	Totals Week Ended July 10
No. of Plants	23		46		41		14		124		124
Da. Still Cap. bbl.	98,200		165,900		141,800		50,900		456,800		456,800
Da. Av. Crude Run.	66,238		110,388		81,714		38,846		297,186		306,577
D. Av. Other Oils	12,854		34,067		9,489		6,092		62,502		47,558
Da. Av. Total to Stills	79,092	—14.0	144,455	+ 6.0	91,203	— 2.7	44,938	— 0.9	359,688	— 2.1	354,135
GASOLINE—Gallons											
Stocks July 31	14,759,704		28,529,209		14,819,798		5,014,494		63,123,205		65,160,561
Prod. 7-31 to 8-7	9,116,531	—11.6	13,708,532	— 7.7	8,585,305	+ 0.8	1,863,641	—12.2	33,274,009	— 7.1	34,021,802
Ship 7-31 to 8-7	10,722,453	+15.7	12,166,286	—18.1	7,988,552	+ 8.5	2,286,468	— 9.2	33,163,759	— 2.4	35,034,453
Stocks Aug. 7	13,153,782	—10.9	30,071,455	+ 5.4	15,416,551	+ 4.0	4,591,667	— 8.4	63,233,455	+ 0.2	64,147,910
Ratio Sales to Prod.	117.6%		87.7%		93.0%		122.7%		99.7%		103.0%
KEROSENE—Gallons—											
Stocks July 31	10,067,112		7,000,752		4,784,439		458,704		22,311,007		22,293,809
Prod. 7-31 to 8-7	2,459,729	+17.0	2,281,686	— 7.0	1,440,590	—34.7	290,852	— 7.9	6,472,857	— 8.5	6,426,449
Ship 7-31 to 8-7	2,783,483	+64.1	2,939,016	+ 2.1	1,396,263	— 9.3	310,780	+24.1	7,429,542	+15.6	5,469,175
Stocks Aug. 7	9,743,358	— 3.2	6,343,422	— 9.4	4,828,766	+ 0.9	438,776	— 4.3	21,354,322	— 4.3	23,251,083
Ratio Sales to Prod.	113.2%		128.8%		96.9%		106.9%		114.8%		85.1%
GAS & FUEL OILS—Gallons											
Stocks July 31	20,451,693		83,907,320		56,586,752		13,825,726		174,771,491		161,564,001
Prod. 7-31 to 8-7	8,560,779	—14.0	13,097,844	— 3.8	12,743,047	— 2.9	9,563,313	— 7.2	43,966,983	— 6.5	146,617,727
Ship. 7-31 to 8-7	8,657,381	— 9.2	13,762,117	+25.7	14,710,482	+ 52.5	9,170,892	— 4.4	46,300,872	+16.6	42,593,118
Stocks Aug. 7	20,355,091	— 0.5	83,243,047	— 0.8	54,619,319	— 3.5	14,220,147	+ 2.9	172,437,602	— 1.3	165,588,610
Ratio Sales to Prod.	101.1%		105.1%		115.4%		95.9%		105.3%		91.4%

Study All Phases of Jobber-Refiner Relations

By Warren C. Platt
Editor National Petroleum News

PRESIDENT NICHOLAS, August 10th, appointed for the National Petroleum Marketers' Association a special committee to investigate the whole subject of the jobber's source of supply.

While the committee has not laid out its investigation, it can be said that it will consider what assurance of security for their supply the jobbers can have among present refiners; among refineries that may be built in the future by refiners; whether it is desirable for the jobbers to establish or cause to be established at the present time or at some time in the future special refineries for themselves, whether these refineries should be or could be financed in whole or in part by jobbers; whether such refineries should consist only of cracking plants and if so, how the cracking process should be selected or what cracking process should be chosen; or whether there should be financial connections between present jobbers and present refiners covering either present plants or the construction of special cracking facilities; or whether better contractural relations can be worked out between jobbers and present refiners, or any refineries that may be established in the future by other than jobbers, which will meet the jobbers' requirements and insure them a source of ready supply.

This committee's work will parallel that of the special committee appointed at the recent meeting of some thirty large jobbers at Chicago, who met to consider the possibility of raising funds from among themselves to build a cracking plant. The association's committee will have available the facts and opinions of the committee of these thirty jobbers, but the association's committee will pursue the investigation much further than is contemplated for what might be called the private committee.

To Study All Sides

President Nicholas has enjoined upon the association's committee the desirability and necessity of making its investigation with an absolutely open mind. He emphasized that the committee is not under instructions to negotiate for a refinery or for a process or to make plans to build a refinery; rather that the committee is to approach the subject from the standpoint of what arrangement can be worked out with refiners which will meet the needs of the jobbers and then to let the investigation develop the various types of relationship, financial and otherwise which might exist. President Nicholas has urged on the committee that the subject be considered on only the most sound, sane and practical business basis.

The association's committee consists of Walter E. Anderson of the Winona Oil Co., Winona, Minn., chairman; H. H. Brownell of the Brownell Oil Corp., Sioux Falls, S. D.; S. S. Cramer of the Wadhams Oil Co., Milwaukee, Wis.; E. E. Smith of the Smith Oil & Refining Co., Rockford, Ill.; C. H. Armould, Armould Oil Co., Hamilton, Ill.; E. E. Bessire, Radiant Oil Co., Lima, Ohio, and C. Rosenthal of the Apex Motor Fuel Co., Chicago.

Presumably the committee will have conferences with refiners as individuals and probably in groups. The committee is to report at the annual meeting of the association at Louisville, Ky., November 17th to 19th.

President Nicholas and the association are to be highly commended for this conservative move of investigation. The committee is well equipped to make a thorough and intelligent investigation.

The problem is a big one. It is also an old one. Various committees have tackled it before. Most of those in the past have aimed to arouse "good feeling" and have been satisfied with talk. This association committee however is expected to bring in a definite, tangible plan of procedure if such a thing is possible; at all events some recommendations that will improve present relations.

Future Supplies Assured

National Petroleum News believes that, when this committee has gotten thoroughly into a first hand survey of the refining situation, it will find plenty of assurance of supplies for the oil jobbers as long as there are any oil marketers in this country. It stands to reason, on the face of it, that, so long as there are any number of jobbers at all in existence who offer a ready market for refiners, that there will be refiners to sell those marketers.

If all present refiners tomorrow were to decide not to sell the jobbers but to distribute only through their own stations or throw their products away, there would at once come into existence other refiners who would seek to make money selling this existing market. These new refiners would not necessarily be jobbers either.

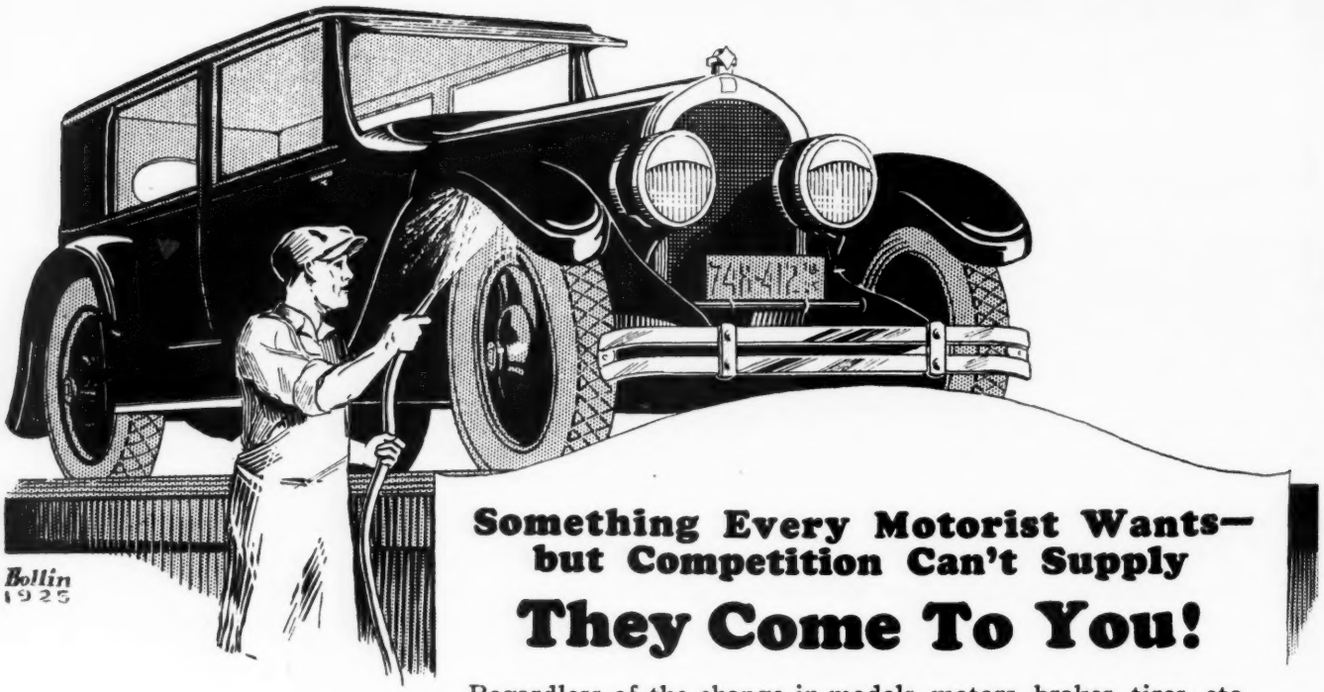
In other words, so long as this market exists there is always going to be opportunity for some one to sell it and make money doing so. However, the names of the people who sell this market may change just as will change the names of the marketers who are the buyers. The refiner has seen hundreds of oil jobbing companies absorbed by refining and other large companies in past years, but other marketing companies have come to take their place.

So long as there is any economic justification for the existence of the oil jobbers we believe there will always be refiners to supply them. And we believe there is the greatest economic justification for the existence of the jobbers. Some times we even wonder if there is not more justification for the oil marketing business being under separate ownership than for its being tied up to a refining company.

It is true that there may be times when the jobbers may have difficulty getting their supplies. They may have to bid high for the supplies, but that is just as likely to happen if the jobbers owned their own refineries as not. That situation would be taken care of by the strength of the demand so long as there are any supplies of crude oil obtainable in this country either from local production or by importing it. The day of exhaustion of those supplies is mighty far distant.

Opportunity for Refiners

We have long thought there is a big opportunity for more refiners who would specialize on selling the jobber exclusively. There are many points in the relationship between jobber and refiner that must be worked out. Many refiners and jobbers have tried to work those points out and have quit, but that is no evidence that they can't be worked out. The industry is much nearer a satisfactory solution of those problems we believe right now than it may realize. The industry has tried out various forms of contract and has at least found some forms that won't work. We believe it is today using a form that holds the secret,



Something Every Motorist Wants—but Competition Can't Supply

They Come To You!

Regardless of the change in models, motors, brakes, tires, etc., every year, the desire for a clean car is universally instinctive and will never go out of date.

But motorists are getting particular how their cars are washed. The slop wash (on the outside only) is rapidly going out of date. The reason is—there's something outstandingly better, remarkably quicker—and car owners buy it.

The KLEAN-RITE Auto Laundry System is taking car washing out of the unprofitable nuisance class and putting it on a profitable business basis which is making real money for franchise owners every day. It is stabilizing the income from filling station property of high value, it is holding trade in the face of new station locations—because it is rendering a thorough, rapid washing service which can not be duplicated any other place in the city. Meeting a continuous demand for an essential service with unequalled dispatch and satisfaction—is the fundamental value of a KLEAN-RITE Auto Laundry franchise.

KLEAN-RITE is economical to the point that it has reduced the total washing cost to 87c per car. It is not a tank or pool system but is a scientific, practical process which delivers all liquids under pressure in a vaporous form with a soft, penetrating, positive cleaning force. It cleans a car thoroughly—underneath the fenders, body, chassis, springs, etc.

We have prepared a booklet on "The Business Possibilities of KLEAN-RITE Auto Laundry" which not only describes and illustrates the KLEAN-RITE system but presents the magnitude of the car-washing field and points out the special opportunities for filling station owners who are looking for a way to boost station profits. We will gladly send copy of this booklet upon request, with no obligation whatever. It presents data which every station owner should have on file. Send for it today.

We install complete compressor plant, soap mixer, water tanks, soap and solvent tanks; build all pits, supply and connect all pipes, hose and nozzles. Also supply formulas and materials. Your plant is ready to run.

Licensed
Klean-Rite
AUTO LAUNDRY

This trade mark is prominently displayed on a large metal sign, at licensed KLEAN-RITE stations. It also appears in the local newspaper ads and other forms of publicity which our Promotional Department provides for franchise owners. With KLEAN-RITE stations being rapidly established in all parts of the country, this trade mark will give valuable prestige to KLEAN-RITE operators, as it will have a national significance.

Klean-Rite
AUTO LAUNDRY CO.

1710 East 75th Street **Chicago. Ill.**

(U. S. Patent No. 1,502,115)

"A Spick and Span Car While You Wait"

Week's Price Changes Tank Wagon Markets

CLEVELAND, Aug. 10.—Four of the big oil companies marketing in the east and southeast in the past two days have cut the tank wagon price of gasoline in their respective territories from 1 cent to 2 cents a gallon. These companies are the Standard of New Jersey, the Standard of New York, the Atlantic Refining Co. and the Standard of Louisiana.

Reductions in the tank wagon market by these major marketing companies probably arise from the fact that Independent marketers are able to get gasoline at laid down prices that permit them to cut prices a margin of profit.

Some of the Independent marketers in various parts of the eastern and southeastern territories are cutting prices because they are obtaining gasoline transported cheaply by tanker from California and Gulf coast ports at prices that permit them to undersell gasoline delivered on Group 3 price, which seems to be the price on which the major marketing companies mainly base their retail prices.

The schedule of reductions, dates and tank wagon changes so far this year in the territories affected, follow:

Standard Oil Co. of New Jersey reduced 1 cent through territory, Aug. 8. Advances of from 8 to 10 cents have been made in his territory during 1925, while declines in price, excluding the cut of Aug. 8, have amounted to 2 cents. Advances of from 6 to 8 cents were made during January and February, then a 1 cent decline each during March and April, and again a 2 cent advance during May. The last previous change was a 1 cent advance on May 26.

Standard Oil Co. of New York reduced 2 cents through territory, Aug. 10. Total advances in price during this year have amounted to 7½ cents, while only a 1 cent decrease was made during March. During January and February, gasoline was advanced 5½ cents, and 2 cents during May. Last previous change was an advance of 1 cent on May 27.

Atlantic Refining Co. reduced 1 cent in Pennsylvania and Delaware on Aug. 10. Total advances in prices of gasoline during this year have been 6½ cents, while no decreases in prices have been made by the Atlantic previous to the one on Aug. 10. Gasoline was advanced 2½ cents in this territory during January, 2 cents in February, and 1 cent each during May and June. Last previous change was a 1 cent advance on June 4.

Standard Oil Co. of Louisiana reduced 1 cent through territory on Aug. 8. Total advances during this year have been 8 cents, while decreases have amounted to 2 cents. Gasoline advanced 6 cents in this territory during January and February, declined 2 cents during March, and increased 2 cents again in May. Last previous change was a 1 cent advance on May 26.

(Detail of changes by dates)

Aug. 11.—Standard Oil Co. of New York further reduced the tank wagon price of gasoline at Boston 2 cents, making the tank wagon price today 20 cents. Service station price remains 24 cents. On Aug. 10, the Standard had reduced both tank wagon and service station prices 2 cents to 22 and 24 cents respectively, as announced in the tank wagon notes appearing elsewhere in this publication.

The prices of the Atlantic Refining Co., as published in the tank wagon table in this issue do not include the reduction of Aug. 10. Prices effective Aug. 10 should be: Boston and Worcester, 20 cents tank wagon, 24 cents service station; Springfield, 20 cents tank wagon, 22 cents service station; Hartford and New Haven, 22 cents tank wagon, 26 cents service station; Providence, 21 cents tank wagon, 25 cents service station. The last three points include 1 cent state tax.

These prices show a reduction of 2 cents on both tank wagon and service station prices of gasoline at Boston, Worcester and Providence; 1 cent at New Haven; 1 cent on tank wagon, and 2 cents on service station at Springfield; Hartford remaining unchanged.

Standard of New Jersey—T.w. and s.s. cut 1 cent through territory, **Aug. 8.**

Standard of New York—T.w. and s.s. prices cut 2 cents, New York state generally, and New England, **Aug. 10.**

Buffalo was not included in cut of Aug. 10, because of a 2 cent cut there on Aug. 6, which brought t.w. price to 20 cents, s.s. to 23 cents.

With the 2 cent service station price cut on Aug. 5 at New England points by the Gulf Refining Co., and Standard Oil Co. of New York, which brought retail price to 24 cents generally without tax, the tank wagon price at Boston and other points generally would be 20 cents. An Independent jobber in New England, however, states that while the Standard has posted 22 cents as its official tank wagon price, and 24 cents as its service station price, it is actually selling at 20 cents from the tank wagon.

Atlantic Refining—T.w. and s.s. prices cut 1 cent, Pennsylvania and Delaware, **Aug. 10.**

Standard of Kentucky—T.w. and s.s. prices advanced 3 cents, at Lexington, making t.w. 21 cents, s.s. 24 cents, **Aug. 4.**

Standard of Louisiana—T. w. and s.s. cut 1 cent, through territory generally, **Aug. 8.**

Bristol, Tenn. was not included in Aug. 8 cut, due to a 2 cent reduction there on July 22 which brought tank wagon to 19 cents and service station to 21 cents, including tax.

Magnolia Petroleum—T.w. and s.s. cut 2 cents, Tulsa and Muskogee to 19 cents t.w., and 22 cents s.s., at both points, **Aug. 4.**

Study All Phases of Jobbers' and Refiners' Relations (Continued)

that of basing the price between refiner and jobber on the open spot market. When this idea is experimented with some more and developed we believe it will be perfected to the point of permanency.

As to jobbers going into refining and refiners going into jobbing, we have always believed the utmost conservatism should be used. It may be good business in some individual cases for the one to embark in the other activity, but we know of cases where it has been a failure; where refiners have fallen down as marketers and marketers have fallen down as refiners. We don't believe that the one is any better qualified for the other's business than the other.

The refining business gives striking evidence of its extreme hazard. Five hundred refineries are in existence and only 300 are running. Forty per cent were unquestionably mistakes and some of those running are also. The jobbing business has no such record as this.

Refining, whether straight refining or cracking, will be more hazardous in the next five years than in the past five because the development and refinement of the refining process is gathering greater headway all the time and will carry the industry much further in the future. Rapid improvement of process means early obsolescence of equipment and plants. It means one must keep up with the procession, regardless of cost or drop out entirely. Only the best and most aggressive management will weather this battle of science in refining in the near future.

Co-operative ventures have not yet startled the world with their record of keeping up in front with well managed hotly competing private concerns. There is no particular reason to believe that a co-operative scheme would shine any more in the oil business than in any other line of business activity.

We have great hopes for the results from this association's committee's investigation. It is not necessary to expect it to bring about radical reform. It is merely succeeds in speeding up the betterment that we believe is now taking place through natural growth of men and the industry, it will have accomplished a great deal.—W. C. P.

Crude Price Changes

Aug. 7.—Standard Oil Co. of Louisiana reduced Bellevue crude 25 cents per barrel to $1.65.

Gulf Production Co. and Louisiana Oil Refining Corp. met the cut on the same date.

Aug. 11.—Joseph Seep Purchasing Agency reduced all Pennsylvania grade crude 25 cents per barrel. New prices are: Allegany district crude in New York Transit Lines, $3.65; Bradford district in National Transit Lines, $3.65; other Pennsylvania grade in National Transit Lines, $3.55; other Pennsylvania in Southwest Pennsylvania Pipe Lines, $3.55; Gaines, $3.20; in Eureka Pipe Lines (West Virginia), $3.50; in Buckeye Pipe Lines (Ohio), $3.50.

There were no changes on Cabell, Corning, Somerset and Ragland crudes today.

on Aug. 1 graded Salt Creek crude,

Aug. 1.—The Midwest Refining Co. posting the following gravity schedule effective that date: 29 to 29.9 degrees, $1.48; 30 to 39.9, $1.56; 31 to 31.9, $1.64; 32 to 32.9, $1.72; 33 to 33.9, $1.80; 34 to 34.9, $1.88; 35 to 35.9, $1.96; 36 to 36.9, $2.04; 37 and above, $2.12.

At the time the Midwest announced this new schedule, it stated that since March 10 of this year, almost all the production in the Salt Creek field has been sold under special contract prices, with little crude being purchased at the old field price of $1.60 per barrel then in effect.

Oil Advertiser Engaged By Bartles-Maguire

MILWAUKEE, Aug. 9.—J. M. McLaughlin, a widely known oil man of Wisconsin, recently became identified with the Bartles-Maguire Oil Co. of Milwaukee. His title is that of assistant to the president and his new duties will be of an executive character. Mr. McLaughlin has the benefit of mature experience in the oil business and an extensive acquaintance among the industry's personnel.

For the past four years he has been conspicuous in the activities of the Wisconsin Independent Oil Jobbers' Association. At present he is vice president of the organization and chairman of the advertising committee. This advertising job with the Wisconsin oil men has unusual significance for the organization has been especially active in the field of publicity in the last two years. Jointly the jobbers of Wisconsin have spent many thousands of dollars to advertise their Independence.

His work with the Wisconsin oil men has been so much discussed that he has been thrust into more or less conspicuous position at national gatherings of oil men from time to time. He is probably known by a great many more people than he himself knows.

Report Joint Advertising Spreads Pennsylvania Oil Markets

CONNEAUT LAKE, PA., Aug. 7. EXTENSION of markets for pure Pennsylvania grade motor oils is the first tangible evidence of the effectiveness of the national advertising campaign of the Pennsylvania Grade Crude Oil Association, it was reported to members at the association's annual meeting here Aug. 5.

Jobbers of motor oils report an increase 15 to 400 per cent in number of dealers who are handling the motor oils which bear the insignia of the association, Rodney J. Alexander, secretary, said.

In answer to any questions as to the benefit of the advertising to the producers, Mr. Alexander said:

"For the benefit of the producer who thinks that all the benefits so far have gone to the refinery members, first let it be realized that our market must be improved and the refiner benefitted thereby, before these benefits can be reflected definitely in a fairer price for crude oil. Second, it is well to note that on August 5, 1923, before this organization was formed, the price of Pennsylvania grade oil on National Transit lines outside of the Bradford field, was $2.50 per barrel. On August 5, 1924, after our advertising had been appearing for only six months, the price was $2.75. Today, after our appearance in the national magazines during a total of 16 months of time, the price is $3.80."

David B. McCalmont, Franklin, Pa., producer, also told of the extention of the market for Pennsylvania oil. R. R. Smith, a London, Ont., jobber, said use of Pennsylvania motor oils was spreading in Canada.

Sell Other Oils

L. P. Litzinger, president, Butler County Oil Refining Co., said the greatest trouble with the Pennsylvania oil men lay with themselves in that they did not see that the Pennsylvania products were handled by the stations and dealers in their own neighborhoods.

Other men who praised the joint advertising movement were Samuel Messer, Oil City; W. H. Say, a producer of Sewickley, Pa., W. H. Hall, jobber of Syracuse N. Y.; W. D. Doyle, producer of Franklin, Pa., and S. Y. Ramage, Oil City.

The 15 directors of the association were re-elected. They are: C. G. Dorn, Bradford; P. C. Hubbard, Bradford; E. C. Breene, Oil City; Samuel Messer, Oil City; L. P. Litzinger, Butler; H. G. Eaton, Warren; C. L. Suhr, Oil City; J. D. Dinsmoor, St. Marys, W. Va., J. P. Flynn, Sistersville, W. Va.; H. A. Wallace, Charleston, W. Va.; John P. Herrick, Olean, N. Y.; David B. McCalmont, Franklin; O. C. Dunn, Marietta, O.; Howard Atha, Mannington, W. Va., and J. D. Gerard, Waynesburg, Pa. Officers for the ensuing year will be chosen at a later meeting of the board of directors.

Among those attending the meeting were:

Rodney J. Alexander, secretary, Pennsylvania Grade Crude Oil Ass'n., Oil City.
John A. Beck, Pennsylvania Refining Co., Karns City.
William N. Bayless, Tiffany-Bayless Co., Cleveland.
F. G. Bish, Clarksburg, W. Va.
L. C. Brink, Brink & Brink, Rew, Pa.
Gus A. Baumetz, Lofgren Oil & Gas Co., Cleveland.
W. J. Brannen, McDonell & Brannen Corp., Bolivar, N. Y.
Joseph F. Bachman, Saxonburg, Pa.
J. W. Ball, Butler, Pa.
Sylvester Breckinridge, Eagle Rock, Calif.
Mrs. J. Frank Buplery, Butler, Pa.
A. L. Confer, Empire Oil Works, Reno, Pa.
F. J. Conerty, Butler County Oil Refining Co., Butler, Pa.
P. F. Conerty, Butler County Oil Refining Co., Butler, Pa.
Mrs. Della Coovert, Butler, Pa.
Orton C. Dunn, Smith & Dunn, Marietta, O.
George H. Davis, Success Oil Co., Titusville, Pa.
W. D. Doyle, Franklin, Pa.
George N. Foggan, Pleasantville, Pa.
H. L. Fredefick, Chicora, Pa.
J. P. Flynn, Sisterville, W. Va.
H. E. Goodrich, Richburg, N. Y.
D. H. Goldman, Pennvis Oil Products Co., Cleveland.
R. S. Hunter, Roberts & White, Sharon, Pa.
John M. Hicks, Renfrew, Pa.
W. H. Hite, Bradford Supply Co., Butler, Pa.
Julius H. Huy, Lofgren Oil & Gas Co., Cleveland.
Mrs. J. H. Huy, Cleveland.
W. H. Hall, Syracuse, N. Y.
E. W. Hughes, Franklin, Pa.
A. Hastings, Woodstock, Ont.
George B. Ingram, Pavania Oil Co., Warren, Pa.
Leroy E. Jordan, Jordan Bros., Andover, N. Y.
James E. Korn, Canfield Oil Co., Cleveland.
F. E. Knox, Oil City, Pa.
E. M. Lyons, Tiona Petroleum Co., Philadelphia.
Lewis P. Litzinger, Butler County Oil Refining Co., Butler, Pa.
Samuel Messer, Jas. B. Berry's Sons Co., Oil City.
Thomas H. Miles, Greenville, Pa.
R. J. Marshall, Coraopolis, Pa.
T. M. Murphy, W. H. Daugherty & Son Refining Co,, Petrolia, Pa.
David B. McCalmont, Franklin, Pa.
John R. Nelson, Canfield Oil Co., Cleveland.
S. S. Nixon, Pittsburgh.
W. F. Parker, Republic Iron & Steel Co., Youngstown, O.
A. Porter, Sr., Success Oil Co., Titusville, Pa.
S. Y. Ramage, Oil City, Pa.
Mrs. W. B. Robinson, Butler, Pa.
Murray G. Service, Waverly Oil Works Co., Pittsburgh.
W. L. Sutton, Sutton Bros., Sistersville, W. Va.
R. R. Smith, Star Oil Co., London, Ont.
W. H. Say, Sewickley, Pa.
G. A. Spang, Butler, Pa.
A. L. Shaner, Bolivar, N. Y.
P. S. Tarbox, Independent Refining Co., Oil City, Pa.
T. C. Wilkins, Emblenton, Pa.
F. H. Webber, F. H. Webber Oil Co. Cleveland.
A. B. Weingard, Pennsylvania Refining Co., Karns City, Pa.
C. M. Welch, Butler, Pa.
Charles Weakley, Pleasantville, Pa.
John T. Wilkins, Emblenton, Pa.
J. O. Young, Young & Rubicam, Philadelphia.
J. G. Yolton, Coraopolis, Pa.

Goodbye to Leakage and Spoiled Shipments

Hackney
MILWAUKEE

THE HACKNEY SEAMLESS BARREL is the ideal container for continuous service. The body is pressed from a solid sheet of steel. Absolutely no chance for leakage there. And the absence of seams means extraordinary long service.

THE HACKNEY TWO-PIECE BARREL has but one seam and that is at the circumference at one side of rolling surface. The chimes and heads are integral parts of the body. That's the kind of construction that defeats nose dives and assures long and continuous service.

THE HACKNEY LIGHT SHIPPER for those manufacturers who want to get their shipments to the customer without excessive spoilage and leakage. This drum job is built by an organization that is geared up to making each package do the work for which it is intended.

A coupon is in the right hand corner to bring you dope on any of the above.

The Hackney Steel Drum is another Hackney package that says a positive goodbye to leakage and spoiled shipments.

Its chimes are pressed and then brazed over an area that is eight times that of the ordinary welded joint. Not much chance for leakage at those two important points, is there?

Then, there is the absolutely circular body that will not give with the first pressure. The reinforcing integral hoops are expanded after the drum body has been welded.

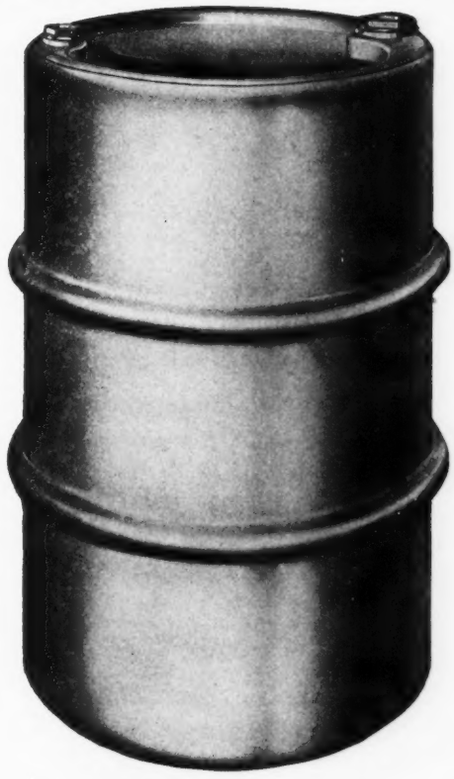
Those things say goodbye to Leakage.

The Hackney patented head openings are raised. Water, dirt and other foreign substances cannot work into the drum unless they run uphill. And that's a pretty tough job as long as the law of gravity is in working order.

There's the goodbye to spoiled shipments. Nothing can get into the drum to spoil its contents.

If you're interested in getting your shipments to your customers or your branches in the same condition in which you sent them, here's the package for you. It may be had in 33 and 55 gallon sizes. Check the coupon for detailed information and quotations on it, or any of the containers shown in the left hand column.

PRESSED STEEL TANK COMPANY—Milwaukee, Wis.



This is the Hackney Steel Drum

PRESSED STEEL TANK CO.,
1141-208 So. La Salle St., Chicago
1317 Vanderbilt-Concourse Bldg., N. Y. City

Send me information on the
Hackney Steel Drum
Hackney Seamless Barrel
Hackney Two Piece Barrel
Hackney Light Shipper

Name .....

Address .....

City ..... State .....

Hackney
MILWAUKEE

H. G. Wylie on "Outside", Quits As Pan-American President

CLEVELAND, Aug. 8

DISSENSION between the old and new factions in the Pan-American Petroleum & Transport Co., has been revealed by the resignation as of Aug. 1 of Herbert G. Wylie, president and general manager. Mr. Wylie who is largely credited with the development of the Doheny properties in Mexico in the last quarter century issued a statement following his resignation saying he was not "within the inner circle" and found he could not assume what he regarded as his responsibility to the stockholders "without being fully informed."

Mr. Wylie's statement issued in New York follows:

"At the time that Mr. Doheny disposed of his control of Pan American Petroleum & Transport Co., fortunately or unfortunately, as the case may be, I had been confined at home for several weeks with laryngitis. The new interests called to see me when my voice was practically inaudible and I could only make my ideas known in a whisper.

"They asked me to remain with them in the same capacity, namely, as president and general manager, assuring me that there would be no changes in the organization. This I was reluctant to do, but on receiving certain assurances, agreed. When I returned to the office I found that the management had business well in hand and had diverted from the office of the president much that had theretofore been under his jurisdiction.

"I realized that I was not within the inner circle and that business was being transacted without consideration for me. As the days went by I felt this more and more: and as the president had a particular responsibility to the stockholders that he could not assume without being kept fully informed, he decided that he could not continue to occupy that office—therefore my resignation."

Mr. Wylie went with E. L. Doheny into Mexico in 1900 and was general manager of the Mexican properties when the first well was brought in in that country in May, 1901. Until a few years ago he spent most of his time in Mexico. In late years his office has been in New York. About two years ago he was elected president of the Pan-American and Mr. Doheny became chairman of the board.

When Mr. Doheny sold control of the Pan-American last spring to a syndicate comprised of the Standard Oil Co. of Indiana, Blair & Co., Inc., the Chase banking interests, and British interests represented by Lord Inverforth, Mr. Wylie remained as president. F. H. Wickett, president of the Dixie Oil Co., a Standard of Indiana subsidiary, was chosen chairman. Concerning the resignation of Mr. Wylie, Mr. Wickett issued the following statement in New York:

"It is with deep regret that I have to announce the resignation of Mr. Herbert G. Wylie as president and director of the Pan-American Petroleum & Transport Co.

"With Mr. Doheny., Mr. Wylie has been associated with this company and its predecessor, the Mexican Petroleum Co., since its inception. When Mr. Doheny sold control of the company to its present stockholders Mr. Wylie was agreeable to remain with the company until the new management had so organized the business that he felt he could properly resign without detriment to the company.

"The officers and directors of the company wish to take this opportunity to express their appreciation of Mr. Wylie's long and valued service."

Concerning work of Mr. Wylie, Mr. Doheny in a book on Mexican petroleum published three years ago, said in telling of the official personnel of the pioneering company: "Mr. Herbert G. Wylie, our general manager, to whose untiring efforts, good judgment, vast knowledge and ability to overcome the unforeseen and seemingly impossible difficulties of engineering, and of working untried men whose language he did not then understand, a large part of our success is attributable."

Mr. Wylie's plans have not been revealed but it is expected that he may join Mr. Doheny in the development of the Pan-American Western Petroleum Corp. on the Pacific Coast.

Individuals Seeking to Invalidate Leases

Staff Special

HOUSTON, Aug. 8.—Three Austin men have filed suit in the Fifty-Third district court of Travis county seeking cancellation and forfeiture of mineral leases on 32 sections of University lands in Reagan county, including productive acreage in the Big Lake field.

Two suits were brought by J. N. Houston, Abe Frank, A. L. Frank and J. E. Anderson. In addition to seeking cancellation and forfeiture of leases each suit asks for $12,000,000. Petitions also ask for the appointment of a receiver.

Defendants include the Texon Oil & and Land Co., the Group No. 1 Oil Corp., the Group No. 2 Oil Corp., and the Big Lake Oil Co., besides J. T. Robison, state land commissioner, and the following officers of the Texon and affiliated group companies: Haymon Krupp, Elias G. Krupp, Frank T. Pickroll and Frank Gordon.

The petitions charge that leases on the designated area were obtained through false statements and mis-statements to J. T. Robison, land commissioner; that the plaintiffs had sought to file on the land, but that the land commissioner refused to consider the applications, stating that certain of the defendants held legal and valid leases on the tracts; and it is further charged that certain of the defendants were to have produced oil in commercial quantities within a specified period, which, the petitions charge, was not done, causing the leases to become invalid and illegal.

The $12,000,000 sought in each suit is the estimated value of oil and gas taken out of the areas covered by the plaintiffs' application to the court.

Midgley Denies G. M. C. Has New Motor Fuel

DAYTON, O., Aug. 11.—Thomas Midgley, Jr., discoverer of tetraethyl lead and vice-president and general manager of the Ethyl Gasoline Corp., flatly denied today that General Motors or any of its affiliated companies has devised a new motor fuel called "Synthol" or any other name as has been reported recently in the newspapers. General Motors and their associates are still pinning their faith to Ethyl gasoline and appear confident that it will be given a clean bill of health in convincing fashion by the committee of seven that is investigating it under the auspices of the surgeon general of the United States, and will be once more placed on the market about the first of the year.

This statement by Mr. Midgley follows a story from Washington that department of commerce officials were astonished by the reports of a new motor fuel being developed by General Motors and that their patent experts were casting about in the files for the patents under which the company might be operating.

Moody Gas Co. Changes Name to Houston Gas Co.

Staff Special

HOUSTON, Aug. 8.—The name of the Moody Gas Co., which proposes to build a gas pipeline into Houston, has been changed to the Houston Gas Co., according to announcement of W. L. Moody III, of Galveston. General offices have now been opened at 706 Cotton Exchange Bldg., Houston. E. C. Conner is in charge of the new office, with L. C. Doney and E. C. Guion assistants.

Mr. Moody announced the acquisition from W. M. Stephenson of San Antonio of gas acreage in Refugio, McMullen, Live Oak and Webb counties.

Smackover Third Zone Development Now Gaining Important Headway

By Paul Wagner
N. P. N. Staff Writer

SHREVEPORT, LA., Aug. 6 WITH 197 wells drilling for the Blossom sand horizon, in the Smackover, Ark., field, the third zone development campaign is now gaining important headway.

The month of August opened with 18 producing oil wells in the third zone making 13,200 barrels daily, at depths ranging from 2580 feet to about 2650 feet.

There are now drilling to the Graves sand (second zone), which set the history-making pace of production in the first half of 1925, a total of 107 wells.

Including production from the third zone, which is included with the second zone in the total of deep pay yields, the Smackover outpour is now around 160,000 barrels of crude daily. First zone production from the Nacatoch sand, at about 2100 feet, now averages below 45,000 barrels daily; and the west side light oil district is making roundly 27,500 barrels daily.

The Smackover district as a whole is, therefore, producing at the present time between 230,000 and 235,000 barrels daily from its several zones and areas.

Deep wells completed in the field, i.e., from the second and third zones, had totalled 611 up to August 1, last. Of this total 152 wells are "dead," 339 are pumping, 54 are being exploited by such artificial means as compressed air machines and 51 are making more than 75 per cent of b.s. and water.

Gas Wells Blow "Wild"

Seven wells are blowing wild from the upper part of the Blossom sand horizon, making a total of 24 to encounter this type of grief above or below the 2600 foot level. An even greater number of wells have had grief at this level than was the case with the second zone development. Gas blowouts were frequent in a gas and water sand found above the Graves pay in the second zone, these blowouts taxing the ingenuity of operators earlier in its development history.

The situation confronted by operators in drilling to the third zone has been a factor in retarding Blossom sand development, which has yet to reach its stride. Grief attendant upon these conditions has caused some operators to place a "peak" production estimate of 50,000 barrels daily on the third zone, while others have estimated its high mark as more probably to be 100,000 barrels daily.

"Bunching" of good wells and a more satisfactory handling of blowout conditions might, however, upset both these estimates materially and result in their being thrown into the discard. Virtually no Smackover operator looks for a repetition of the prolific second zone yields to come from Blossom sand operations but even at greatly reduced maximum production figures the aforementioned estimate may be worth something or nothing.

Second zone production in the Smackover field reached a daily maximum of 396,000 barrels at one time in May, giving the district as a whole a total approximating 480,000 barrels. Whether or not this level can be reached again as a result of third zone developments is questionable, but the approximate maintenance of present production in other zones and the development of the Blossom sand to a height of 250,000 barrels daily would accomplish that result.

The Texas Co's. No. 7 Alphin, in 3-16-15, and the Crawford & Sebastian No. 5 Graves, in the same section, are the only two wells in the third zone that are making more than 1000 barrels daily. As shown by an accompanying table the Graves well is good for 5500 barrels daily and the Alphin for 3000 barrels. The other 16 third zone wells are producing, variously, from 40 to 700 barrels daily.

Mazda Oil Corp's. B-1 Lawton, in the northeast of the northeast of the southwest of 10-16-15, is one of the currently interesting deep tests penetrating the third zone. It was drilled to total depth of 2720 feet, where six feet of sand was taken in the lower part of the Blossom formation. The well made 15 million cubic feet of gas and 100 barrels of oil, salt water and sediment.

Gulf Refining Co. of Louisiana, drilling to 2681 feet in its No. 1 Scott, in the southwest of the southwest of the northeast of 34-15-15, got 35 million cubic feet of gas daily in 108 feet of broken formation.

That the second zone is still capable of occasional large wells is indicated by the completion the first week in August of the Sinclair Oil & Gas Co's. No. 10 Berry, in the southwest of the northeast of the southwest of 33-15-15, which came in from the Graves sand at 2388 feet, making 10,000 barrels daily, initial maximum production.

Standard Pipe Line Co., Inc., which began pumping crude through its new line to the Mississippi river, July 19, last, has discontinued moving heavy oil from its Murphy "B" storage to El Dorado and has cut down shipments at this point from 150 to 50 cars daily. It has also cut down tank car shipments from its Kenova loading racks from 260 cars to about 200 barrels daily. Because of the operation of its 10-inch pipeline to the Mississippi river still further reductions in tank car shipments are proposed.

Tabloid Record of Smackover Third Zone Wells

Company-Well	S-T-R	Daily Prod. in bbls.
Texas Pacific Coal & Oil Co.		
Laney 5*	31-15-15	625
Laney 7	31-15-15	150
Simms Oil Co.		
Laney 7	31-15-15	600
Hirsch 5	31-15-15	200
Bailey & Murray.		
Rhoten B-1 & 2	32-15-15	450
Houston Oil Co. of Texas		
Reynolds 3	27-15-15	400
Laney 10	31-15-15	300
Crawford & Sebastian		
Graves 5	3-16-15	5500
The Texas Co.		
Alphin 7	3-16-15	3000
J. W. Clark		
Palmer 3	9-16-15	700
Hickman et al.		
E. L. Graves	3-16-15	300
Phillips Petroleum Co.		
Laney 9	31-15-15	300
J. H. Meek, Trustee		
McKenzie	36-15-15	100
Laurel Oil & Gas Co.		
Houston 1	12-16-16	70
Page Oil Corp.		
Murphy 5	7-16-15	60
Lion Oil & Refining Co.		
Alphin 5	17-16-15	90
Lawton A-6	10-16-15	40

* "Discovery" well.

The Patent Situation
and
The Dubbs Cracking Process

It is a matter of pride with us that the general principles which constitute the Dubbs Cracking Process today, are the same as in the beginning of its career The elements are:

(*a*) A pipe still
(*b*) An enlarged expansion chamber
(*c*) A dephlegmator
(*d*) A condenser
(*e*) Operation under self-generated pressure, as defined in patent No. 1123502

Under later patents, we claim the exclusive rights for the Dubbs Process:

(1) The return of the reflux condensate to the system for further treatment, as defined in the claims of issued patent No. 1392629

(2) The return of the reflux condensate to the system for further treatment by forced (mechanical) means (pump), as defined in the claims of issued patent No. 1525281

(3) A controlled dephlegmation of the vapors, as defined in the claims of issued patent No. 1484445

(4) The "overhead feed" of the charging stock, as defined in the claims of issued patent No. 1488325

(5) Operation at differential pressures in the system, as defined in the claims of issued patent No. 1534927

(6) The passage of independently heated streams of charging oil and reflux condensate to a common vaporizing zone as defined in claims of issued patent No. 1537593

(7) The "split feed" of the charging stock, part overhead, part direct to the heating elements, as defined in the claims of issued patent No. 1522425

(8) The passing of the heated oil, through a series of heated vaporizing chambers, as defined in the claims of issued patent No. 1440772

(9) Passing the oil in a closed cycle through the heated element and expansion chamber with recracking of reflux condensate and withdrawal of heavy residuum, as defined in the claims of issued patents No. 1534927 and No. 1281884

Second Deep Well in Garber Field Makes Flow From Wilcox Sand

By J. C. Chatfield
N. P. N. Staff Writer

Bulletin

N. P. N. Fast Wire

TULSA, Aug. 10.—Roxana Petroleum Corp.'s No. 1 Wolf, in the southeast corner of the northwest of 13-2-4W which topped Garber deep sand at 4390 feet late last week was making 60 barrels per hour today with the bit four feet in the sand. The well is still drilling.

TULSA, Aug. 8

DRILLERS as well as mahogany desk executives appear to be taking their vacation in August this year. At least there have been few developments of interest in Oklahoma and Kansas during the first week of the month.

The week has seen the Garber deep sand scratched by a second well, one completion has been reported in the Braman field, one in the Gypsy pool and the third well in the Salt Fork (Thomas) field would have been completed had a joint of casing not been dropped. That is the story in a nut-shell. There have been no wildcat discoveries of importance.

Garber still holds the center of the stage in Oklahoma production and will continue to do so for several weeks to come as operators watch the progress of the dozen wells which are rapidly approaching the deep sand. Roxana Petroleum Corp. has the honor of being the first to reach the sand since the discovery well was drilled in last April by the Sinclair Oil & Gas Co.

On Thursday, Aug. 6, just 125 days after Sinclair drilled in its No. 25 Belveal, Roxana scratched the deep sand in its No. 1 Wolf in the SEc NW of 13-22-4 at a depth of 4390 feet. This well is approximately a half mile northwest of the Sinclair discovery. When the sand was encountered the well started making four million cubic feet of gas and a little later was spraying oil. The test was shut down to run the 6⅝ inch casing preparatory to drilling in.

The 6⅝ inch casing was run in this morning, Aug. 8, and the well made a flow over the top of the derrick. It will be drilled in immediately. Conditions surrounding the bringing in of the Roxana test thus far have been very similar to those in the discovery well.

Mystery Well Drilling

Two miles south and a mile and a quarter east of the Roxana well Sinclair is still drilling ahead on its No. 1 Burns which is generally referred to as as mystery well. At a depth of 4778 feet this well was reported showing some heavy oil. It is stated that formations in the Burns well are being encountered about 600 feet lower than in the discovery well. Scouts are reporting that formations in other wells nearer the discovery are running upwards of a hundred feet lower than in the Belveal. A few have been brave enough to predict that the Wilcox sand probably will not cover a very large area at Garber on the strength of what they have been able to read in the various well logs.

Next week may see a number of additional completions in the Garber deep sand. It is certain that most of the 12 wells now drilling around 4000 feet will be in before the end of August. The month should go quite a way toward telling the story. The next crop of wells probably will not be in until September. There are 36 going down to the Wilcox unless they are side-tracked before they get there by encountering a few more undiscovered shallow sands.

Having returned its cost a good many times since April 3, the Belveal No. 25 discovery well is being gradually drilled deeper by way of experiment. Thus far the cautious drilling ahead at the rate of a foot or more per day has been highly productive of results. A week ago the well was drilled 6 ft. deeper in the sand to a total depth of 4413 feet and increased its production to around 1800 barrels per day. This week further drilling has carried the well 20 ft. deeper to a total depth of 4433 feet and production has increased to 2335 barrels per day. The well now has 56 ft. of sand.

Interest is subsiding in the possibilities of the 2300 foot sand and the 3600 foot sand found by wells bent for the Wilcox. Seven tests drilled into the 2300 foot level yielded one 800 barrel well, three small producers and three found water in the top of the sand.

It appears that the productive area of this sand will be limited to the east half of section 13-22-4W and the west half of section 18-22-3W. There are now 24 wells producing from this sand a little over 400 barrels per day. The Layton sand found in three wells has had little oil above the water.

New Well in Braman

Comar Oil Co. has completed its No. 2 Bethel in the SW of 5-28-1W in the Braman townsite field. This well came in on Aug. 5 and made 1884 barrels in a 24 hour gauge. The Herbert No. 1, discovery well, was cleaned out this week and increased its production to 6000 barrels, the greatest amount it has

Drilling Operations in Oklahoma, Kansas and N. Texas

	Aug. 8 — Week Ending — Aug. 1									
	Loc.	Rigs.	Drg.	S. D.	Total	Loc.	Rigs.	Drg.	S.D.	Total
OKLAHOMA										
Burbank	4	4	25	...	33	4	4	25	...	33
Other Osage	16	6	80	10	112	16	6	80	10	112
Bristow-Cushing	19	31	133	30	213	16	33	134	28	211
North Oklahoma	13	24	189	93	319	17	25	184	93	319
South Oklahoma	10	24	109	66	209	10	17	117	56	200
Muskogee	...	8	46	15	69	...	7	42	15	64
Okmulgee-Bristow	5	47	142	34	228	6	48	131	68	253
Tonkawa	...	1	26	8	35	...	4	26	13	43
Wewoka-Cromwell	10	13	175	29	227	11	17	180	33	241
Total Oklahoma	77	158	925	285	1445	80	161	919	316	1476
KANSAS	71	102	260	123	556	76	98	273	122	569
NORTH TEXAS										
Eastland County	...	1	29	6	36	...	1	23	6	30
Stephens County	...	29	44	27	100	...	30	46	26	102
Texas Panhandle	...	11	29	12	52	...	12	30	11	53
Mexia District	...	28	25	15	68	...	24	22	7	53
E. Tex. Wildcats	...	10	4	21	35	...	11	6	18	35
W. Tex. Wildcats	...	32	149	56	237	...	26	150	61	237
Wichita Falls	...	49	156	38	243	...	51	166	41	258
Total N. Texas	...	160	436	175	771	...	155	443	170	768
GRAND TOTAL	148	420	1021	583	2772	156	414	1635	608	2813

ever produced. Comar drilled its No. 1 Bechtel 5 feet deeper to a total of 2385 and with 23 feet of sand production increased 1000 barrels.

On the Braman townsite optimism has fled. Only four wells are now drilling out of the 36 which were started soon after the field was first discovered. It appears probable that the bulk of the oil to be produced by the field will come from the firmly held acreage north and east of the town. This may be expected to be developed much more slowly than would have been the case had the field centered under the town.

Comar's production from five Braman wells is around 12,500 barrels per day, the only other important producing well

Completions in Oklahoma and Kansas, Week Ended August 8

OKLAHOMA

Carter County

Company	Well No.	Location	Depth	Init. Prod.
Wirt-Franklin	1	C NE SW NE 22-2-3 W	2586-2901	325
Humble	16	SWc NE SW SW 9-4-2W	2278-2298	50
Noble-Oleson	1	C NE SW NW 34-1-3 W	T. D. 3460	Dry

Comanche County

Company	Well No.	Location	Depth	Init. Prod.
Cherry-Couch	1	NEc SW NW 24-2-10 W	T. D. 1634	Dry

Creek County

Company	Well No.	Location	Depth	Init. Prod.
Gled	1	SWc NW NW 13-19-8 E	2117-2154	10 & 1½M
Tibbens	1	NEc SE NE 14-14-8 E	2345-2395	150
Texas	1	SEc NW 25-17-9 E	2847-2854	165
Wright	5	SWc NE SW 24-17-10 E	1808-1833	110
Jackson-Wise	1	NEc SE NW NE 3-17-11 E	1803-1807	2M
Wilcox et al.	2	NWc SE SW 1-16-11 E	2272-2305	45
Tibbens	3	NWc SW NE 31-15-9 E	2397-2361	40
Transcontinental	2	SEc NE 24-17-7 E	T. D. 3097	Dry
Gray et al.	1-A	NWc SE NE 3-18-11 E	T. D. 2465	Dry
Pennock	2	CNL NE NW 8-16-11 E O.W.D.	2783	Dry

Garfield County

Company	Well No.	Location	Depth	Init. Prod.
Cosden-Marland	52	CNL SE 13-22-4 W	2245-2257	800
Sinclair	19	C NW NE NE 25-22-4W O.W.D.	2100-2130	25

Garfield County—Garber

Company	Well No.	Location	Depth	Init. Prod.
Sinclair	11	SEcNESWSW19-22-3WO.W.D	2194-2196	150
Imo	3	C NE SW 31-22-3 W	2200-2215	175

Hughes County

Company	Well No.	Location	Depth	Init. Prod.
Burk-Greis	1	SEc NE SE 24-9-8 E	3389-3428	50M
I. T. I. O.	5	C NW NE SW 1-9-9 E	3379-3393	520
Slick	4	C NE NE SW 3-9-9 E	3297-3309	25
Tidal Osage	3	C SW SE NW 3-9-11 E O.W.D	2934-2939	45
Mid Kans	1	C SE SW NE 4-9-11 E	2890-2941	335
Prairie	2	C NW NW NW 20-8-11 E	3667-3797	6½M
Roxana	1	C NW SE NE 35-8-8 E	T. D. 3325	Dry
Carter	1	C NW SE SE 35-8-8	T. D. 2940	Dry
Nelson-Smith	1	C SE SE 13-8-9 E	T. D. 360	Dry

Hughes County—Papoose

Company	Well No.	Location	Depth	Init. Prod.
Margay	5	SEc NW SW 17-9-9 E	T. D. 3318	Dry
Margay	6	NEc SW SW 17-9-9 E	T. D. 3408	Dry
Roxana	1	C NE NE SW 17-9-9 E	T. D. 3180	Dry
Roxana	2	C SW NE SW 17-9-9 E	T. D. 3200	Dry

Kay County

Company	Well No.	Location	Depth	Init. Prod.
Souligny et al.	1	C NE SE NW 31-27-2 E	2485-2507	80

Kay County—Tonkawa

Company	Well No.	Location	Depth	Init. Prod.
Comar	4	C NW SW SE 35-25-1 W	T. D. 1914	Dry
Comar	6	C SE SW SE 35-25-1 W	T. D. 1544	Dry
Comar	7	C SW SE SE 35-25-1 W O.W.D	T. D. 2543	Dry

Lincoln County—Davenport

Company	Well No.	Location	Depth	Init. Prod.
Magnolia	3	SEc NW SW 2-14-5 E	3301-3373	505

Noble County

Company	Well No.	Location	Depth	Init. Prod.
Comar	13	C SW NW SW 2-24-1 W	T. D. 3150	Dry
Comar	3	C NE NE SE 3-24-1 W	T. D. 4400	Dry

Okfuskee County

Company	Well No.	Location	Depth	Init. Prod.
Indep.	1	NEc NW NW 4-11-11 E	T. D. 3728	Dry
Carter	1	C SW SW NW 31-10-10 E	T. D. 3455	Dry
Indep.	2	NEc SE SW 33-12-11 E	3679-3696	50
Indep.	1	NEc 25-11-9 E	2960-2974	27M
Riverland	1	SWc SE SW 25-11-11 E	T. S. 1608	1000 & 50M
Windsor et al.	2	NWc SE SW 22-11-11 E	2589-2629	200
Windsor et al.	6	SEc NW SW 22-11-11 E	2625-2640	520

Okfuskee—Papoose

Company	Well No.	Location	Depth	Init. Prod.
Fuhrman-Shaffer	1	C SE NW NW 22-10-9 E	3335-3364	3½M

Okmulgee County

Company	Well No.	Location	Depth	Init. Prod.
Enfisco	3	SEc NW 3-15-11 E	1836-1894	10
Phillips	2	CWL NW NE 1-15-12 E	2005-2033	155
Olean	3	CWL E½ SE 11-15-12 E	2109-2125	25
Olean	4	CSL NE SE 11-15-12 E	2160-2171	25
Page	3	NWc SW NE 14-15-12	2626-2637	90
Okla. East	1	NEc SE NW 14-15-12	2619-2636	15
Black	1	SEc NW NE 27-13-11 E	2150-2160	3M
Magnolia	1	SEc NW NE 5-12-12 E	2305-2325	10M
Continental et al.	6	C NE NE NW 20-12-12 E	1885-1936	15
Schoenfelt et al.	5	SEc NW 4-11-12 E	1501-1555	20
Sommerville	1-A	CNL SW SW NW 25-13-14 E	1756-1803	125
Aggas	1-A	SEc NE NE 16-14-14 E	1208-1216	25
Wineland	11	SEc NE SE 8-14-15 E	1492-1509	25
Devonian	5	CWL NW SE 7-15-13 E	2692-2696	15
Swindler	8	SEc NE SE 20-15-14 E	2186-2200	480
Kingwood	23	CEL SE SE SW 34-15-14 E	2144-2156	15
W. Phillips	2	SWc SE NE 23-13-11 E O.W.D	T. D. 2503	Dry
Aztec	4	NWc SE SW 31-12-12 E	T. D. 2725	Dry
Pulaski	5	NWc NW 1-15-13 E	T. D. 3180	Dry
Deep Fork	6	SEc SE 35-12-13 E	T. D. 2873	Dry

Osage County

Company	Well No.	Location	Depth	Init. Prod.
Amer. Dev.	3	NE NW NE SE 13-23-10 E	T. D. 2339	Dry
Beacon	1	SE NW NW NW 16-25-10 E	T. D. 2191	Dry
Merrill et all	3	C NE 17-27-10 E	T. D. 1730	Dry
Texas	1	SE SW 29-28-12 E	T. D. 2017	Dry
Swoverland	1	NW SW 19-21-10 E	2112-2118	8M
Breene et al.	13	C NW 23-21-10 E	1575-1582	25
Oswego	2	NE NW NE NE 21-21-12 E	1560-1576	5
Amerada	2	NWSWNWSE16-22-9E O.W.D	2397-2402	125
Beacon	15	CSL NW 21-23-8 E	858- 863	7
Foster-Norwood	49	NE SE NW SW 23-24-9 E	2091-2140	10
Barnsdall	2	SE NE SE SW 1-24-11 E	1700-1750	15
Owen Osage	331	SW NE 32-24-12 E	1595-1600	2M
I. T. I. O.	331	SE SW SE NE 34-25-11 E	1696-1734	4M
I. T. I. O.	1	SW NW 14-29-10 E	1114-1129	30
Wiser	12	C NE NW NW 27-29-11 E	800- 823	30

Osage County—Burbank

Company	Well No.	Location	Depth	Init. Prod.
Phillips	11	C SW NE NW 12-27-5	2960-3031	150

Pawnee County

Company	Well No.	Location	Depth	Init. Prod.
Magnolia	4	C NW NE NE 5-22-3 E	4064-4095	200
Mid-Continent	12	NWc SW SW 16-20-7 E	2609-2623	40
Tidal	7	NWc 21-20-7 E	2625-2645	50
Krow et al.	1	NEc SE NE 10-23-5 E	T. D. 3751	Dry

Payne County—Deep Rock

Company	Well No.	Location	Depth	Init. Prod.
Deep Rock	1	SE SW NE 23-18-3 E	4274-4313	635
Mulberry	1	NEc NW SW 5-17-4 E	3685-3753	25 & 17M

Pittsburg County

Company	Well No.	Location	Depth	Init. Prod.
Quinton	1	SEc SW SE 207-18 E	T. D. 2400	Dry

Pottawatamie County

Company	Well No.	Location	Depth	Init. Prod.
Ossie	1	SWc NW 13-10-2 E	T. D. 3363	Dry

Seminole County—Cromwell

Company	Well No.	Location	Depth	Init. Prod.
W. Phillips	1	C SW SE NE 28-11-8 E	T. D. 3582	Dry
Prairie	2	C NE NE SE 32-11-8 E	T. D. 3020	Dry
Nowata	2	C NW NW NE 3-10-8 E	3405-3436	520 & 8M

Seminole County

Company	Well No.	Location	Depth	Init. Prod.
Magnolia	4	C SW NW SW 32-8-8 E O.W.D	4000-4054	20

Stephens County

Company	Well No.	Location	Depth	Init. Prod.
Gant et al.	2	SWc SE SW 33-1-8 W	T. D. 2429	Dry
Lone Star	1	SWc SE SW 17-1-8 W	T. D. 2510	Dry

Tulsa County

Company	Well No.	Location	Depth	Init. Prod.
S. S. Home	2	NEc NW SE 4-19-11 E	1800-1809	7M
Black et al.	13	NEc NW NW 16-18-13 E	1196-1210	15
Wade et al.	3	NEc NW SE NE 2-17-14 E	1349-1363	65
Frates	4	SEc SW NE NE 2-17-14 E	1343-1358	50
Green et al.	2	NEc SE NW NE 2-17-14 E	1348-1361	25
Minshall	1	SEc NW SE 27-19-11 E	T. D. 2370	Dry
Shaffer	4	NEc SE 6-19-12 E	T. D. 1725	Dry
Peterson	1	SWc NW NE NW 18-19-14 E	T. D. 1380	Dry

Wagoner County

Company	Well No.	Location	Depth	Init. Prod.
Eastman	1	SWc NE NE 17-17-15 E	T. D. 1100	Dry
Coady	1	NWc SE 29-17-18 E O.W.D.	T. D. 3242	Dry

KANSAS

Butler County

Company	Well No.	Location	Depth	Init. Prod.
Empire	26	SWc 20-25-5 E	2470-2481	200
Empire	26	NEc 30-25-5 E	2467-2485	240
Rogers	1	SWc NW 29-26-8 E	2669-2694	35
Callahan et al.	1	NWc 26-23-4 E	T. D. 2439	Dry

Cowley County

Company	Well No.	Location	Depth	Init. Prod.
McKnab	1	NEc SE 34-32-4 E	T. D. 4140	Dry
Murphy	1	SEc NW 30-33-5 E	T. D. 3551	Dry
Norton et al.	1	SWc NE 35-34-3 E	T. D. 3985	Dry
Nathan et al.	1	NWc NE 20-34-4 E	T. D. 3732	Dry

Cowley County—Graham

Company	Well No.	Location	Depth	Init. Prod.
Roxana	1	NWc SW 10-33-8 E.	2560-2585	70

Elk County

Company	Well No.	Location	Depth	Init. Prod.
Theta	1	C SE SE 34-29-12 E	1660-1678	2M
Conley et al.	1	NEc SW 3-30-9 E	1023-1033	125
Southwestern	4	SWc NE 14-31-10 E	1340-1358	75
York State	3	SEc NW 21-30-11 E	T. D. 1960	Dry

Greenwood County

Company	Well No.	Location	Depth	Init. Prod.
Titus et al.	6	NEc NW NW 29-22-10 E	2338-2398	400
Phillips	1	SEc SW SW 29-22-11 E	1975-1994	50
Phillips	5	CNL N½ SW 33-22-11 E	1986-1945	25
Braden Bros.	3	SWc NW NE 27-22-13 E	1857-1866	10
Robertson et al.	2	NEc SE NE NE 25-23-8 E	2563-2613	350
Robertson et al.	3	NWc NE NE 25-23-8 E	2563-2617	350
McGinnis et al.	1	NWc SW 11-23-9 E	2335-2380	100
Mission	1	SWc 19-23-9 E	2554-2584	400
Mission	1	NWc 30-23-9 E	2552-2584	200
Mid-Kansas	22	NEc NW SE 23-23-10 E	2064-2114	130
Roth-Mission	55	CEL SW 28-23-10 E	2305-2348	50
Mid-Kansas	30	SWc NE NE 31-23-10 E	2296-2352	100
Pulaski	5	SEc NE 8-23-11 E	1930-1967	50
Houston Okla.	12	CWL SW SW 14-24-12 E	1750-1764	10
C. & C.	5	C NE SW 31-25-13 E	1621-1626	15 & 1M
Noble	1	SWc SE SW 1-22-11 E	T. D. 2007	Dry
White Eagle	6	SWc NW NW 12-22-11 E	T. D. 1833	Dry
White E. et al.	1	NWc SW 35-23-8 E	T. D. 2646	Dry
Shelly	5	NWc SE NW 2-23-9 E	T. D. 2427	Dry
Transcontinental	11	SEc SW 2-23-9 E	T. D. 2345	Dry
Redgraves et al.	1	C SW SE 21-24-11 E	T. D. 2053	Dry
Skelly	3	NEc SW NE 15-24-12 E	T. D. 1750	Dry
Dewey-Dean	1	NEc SW 31-24-12 E	T. D. 2256	Dry
Bisagno et al.	7	CWL SE NW NE 6-25-13 E	T. D. 1672	Dry

Russell County

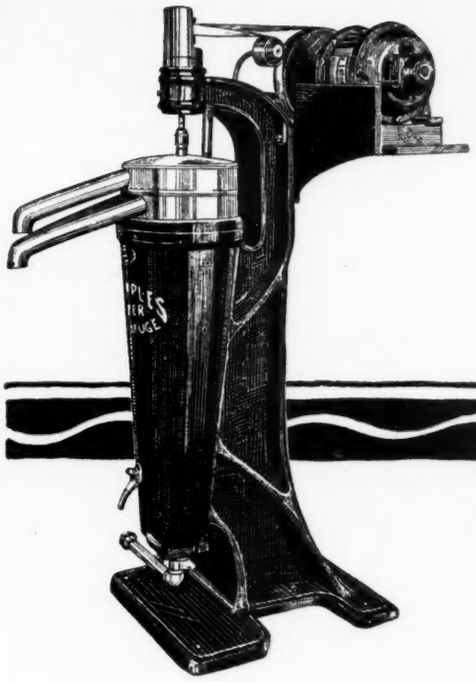
Company	Well No.	Location	Depth	Init. Prod.
Streeter-Stearns	4	NEc NW SW 8-12-15 W	2731-2737	450

Sumner County

Company	Well No.	Location	Depth	Init. Prod.
Phillips	1	SWc SE 12-30-4 W	T. D. 4483	Dry

Woodson County

Company	Well No.	Location	Depth	Init. Prod.
Iowa-Kans.	2	SWc NW 1-24-14 E	T. D. 1645	Dry
Curtiss et al.	1	NWc NE SW 22-25-14 E	1849-1500	2½M



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in the field being the Herbert No. 1. Shawver et al No. 1 on the townsite is making 60 barrels on the pump.

Marland Oil Co. has been fishing most of the week in its No. 1 on School in the SEcSW of 16-25-2W, three quarters of a mile west of its No. 2 Thomas, discovery well of the Salt Fork (Thomas) field. At 4265 feet a joint of casing was dropped in the hole which was showing some oil at the time. After vain attempts to recover the casing it has been decided to drill it up. Yesterday morning, Aug. 7, this well made a flow of 90 barrels in an hour. Formations in this well are running about 150 feet lower than in the discovery. Aside from this well only two drilling in the field are below 3000 feet. They are the Wentz No. 1 in section 21 and the Selby No. 1 in section 15.

The Twin State Oil Company's No. 2 Siler in the NWc of 22-25-2W has continued to make large quantities of water and its oil production has declined rapidly. One day this week it swabbed 765 barrels of oil and 210 barrels of water.

Wentz Wildcat

Less promise is being shown by the Wentz wildcat test in the SWc of 27-22-1E which found a sand at 4510 feet last week which was showing oil. At first the well filled up to the top with oil. When this was swabbed out it filled up 500 feet again. Of this about 100 feet was water. The well is being allowed to stand temporarily to see what it will do.

Gypsy Oil Co. has completed a third oil well in the pool bearing its name near Holdenville. Its No. 2 Proctor in the NWc SW NE of 35-8-8 topped the sand at 3268 feet and has been drilled to a total depth of 3298 feet, the well being still in the sand. The well started off making 18 barrels per hour. Two offsets to the west of the Proctor lease drilled by Independent and Roxana were gas wells.

The next few weeks will see some interesting further development of the Tonkawa deep sand along the northwest edge of the field. There are now 11 wells in which the 8¼ inch casing has been cemented preliminary to drilling in. Some operators are expecting a rather large increase in the deep sand production from these wells. Persistent cleaning out of existing wells has served to increase production from the deep sand during the past week although there have been no new wells added.

Crude Market

Scattered reductions in the price of crude on the Gulf coast and in Louisiana as well as talk of a reduction of refinery runs through the field have given rise to some apprehension among producers as to the stability of the present posted market. The feeling of pessimism was heightened somewhat today when there was a widespread reduction in gasoline prices through the eastern and southern states by the Standard Oil Co. of New Jersey, Standard Oil Co. of Louisiana and the Atlantic Refining Co.

The talk of a weaker crude market does not come from any current increase in production, particularly in Oklahoma but rather from the fact that refiners in all parts of the country have been running a tremendous quantity of oil with the result that refined markets are decidedly soft. There has been no great curtailment of operations thus far but prices of gasoline are dropping at a rate which suggests that a shut-down may be necessary to avoid manufacturing losses.

During the first week in August there were 106 wells completed in Oklahoma. Of that number 39 were dry holes, 11 were gas wells and 56 were oil wells. Total new production from the 56 oil wells was only 8407 barrels, an average of 150.1 barrels initial production per well. During the week ending Aug. 1, 51 oil wells were completed in the state with a combined initial production of 26,579 barrels, an average of 521.2 barrels per well.

In Kansas 22 oil wells were completed, 2 gas wells and 17 dry holes. Total new production was 3435 barrels, an average of 156.1 barrels per well. This is an increase of 30 barrels per well over the average for the previous week.

Drilling operations in the field are about on an even keel. Total operations in the field on Aug. 8 were 1445 as compared with 1476 on Aug. 1. In Kansas total operations were 556 as compared with 569 the previous week and in Texas operations were increased from 768 on Aug. 1 to 771 on Aug. 8. The net change in all fields was a decrease of 156 to 2772 of which 1621 were drilling wells, 583 shut down, 420 rigs up and 148 locations.

Completions in North and Central Texas, Week Ended August 8

Company	Well No. Farm	Location Survey	Depth	Init. Prod.
Archer County				
W. Phillips	12-Wilson	B. B. B. & C.	1512–1514	400
Major	8-Cowen	Jefferson 50	1077–1085	17
Empire	2-Anderson	S. A. R. 21	1420–1426	58
Empire	3-Anderson	S. A. R. 21	1420–1422	240
Norday	2-Anderson	S. A. R. 21	1408–1415	140
Norday	4-Anderson	S. A. R. 21	1413–1422	30
Texas	5-Richardson	S. A. R. 1	1310–1315	70
Gulf	1-Wear	C. & P. 8	1279–1285	49
Gwynn et al	1-Dowlin	H. & T. B. 2	T. D. 1812	Dry
Beaudon	1-Coleman	Braxos 66	T. D. 1815	Dry
Burton et al	1-Wilson	A. T. N. C. 87	T. D. 1604	Dry
Gulf	1-McCrary	A. T. N. C. 75	T. D. 1411	Dry
Pace et al	1-Wilson	Wm. Walker	T. D. 1450	Dry
Consolidated	2-Wilson	A. T. N. C. 76	T. D. 1450	Dry
Humble	1-Wisdom	Stone	T. D. 1490	Dry
Childers	1-Claypool	Scott	T. D. 1610	Dry
Hoosier	1-Wilson	Scott	T. D. 1114	Dry
Texas	1-Anderson	S. A. R. 21	T. D. 1778	Dry
Magnolia	5-Rogers	T. E. & L. 2406	T. D. 1525	Dry
Brown County				
Hughes	1-Arlege	Mitchell	1304–1312	20
Moore-Wilson	2-Baxter	Miller	1282–1298	50
Rhodes-Hyer	9-Prater	Travis	1305–1323	18
Stone	1-Byrd	Travis	1329–1332	50
Moore-Curry	1-Chambers	Logan	T. D. 1328	Dry
Callahan County				
Monk et al	1-McDonough	Knight	1426–1433	110
Urban	1-Finlay	O. A. L. 75	2067–2094	25
Eastland County				
Dorothy	3-Kincaid	H. & T. C. 24	1672–1690	25
Root et al	10-Noble	H. & T. C. 25	3620–3628	50
Panhandle	1-Casey	McLennan	T. D. 1700	Dry
Phillips	1-Allen	T. E. & L. 1177	T. D. 2040	Dry
Texas	1-Foster	C. T. 20	T. D. 3121	Dry
Montague County				
Texas	4-Gist	Donahue	901–907	25
Navarro County				
Pierce et al	67-McKie	Broyles	T. D. 2505	Dry
Humble	28-Ramsey	Smith	T. D. 2076	Dry
Humble	11-Fleming	Barry	1588–1620	21
Humble	20-Ramsey	Smith	1520–1617	8
De Armond	2-Bailey	Rahm	1605–1647	23
De Armond	3-Bailey	Rahm	1600–1650	20
Humble	23-Kent	Smith	1525–1605	11
Skelly	3-Gentry	Taylor	1500–1605	12
Tidal	7-Thompson	Rahm	1628–1648	12
T. & B. V.	1-Right-of-way	Harris	980–1100	12
T. & B. V.	2-Right-of-way	Harris	1050–1100	12
Atlantic	1-Talley	Boren	2973–2991	110
Sun	3-Hillburn	Hudson	2984–2998	75
Potter County				
Amarillo	1-Bush	B. S. & F. 23	T. D. 3496	12M
Shackleford County				
Hope	3-Raynolds	T. P. 24	1291–1298	50
Albany	1-Raynolds	T. P. 23	T. D. 4427	Dry
Stephens County				
Phillips	1-Allen	T. E. & L. 1177	T. D. 2040	Dry
Barkley et al	4-Prichard	T. & N. O. 2	T. D. 3560	190
Carter	2-Farbrough	H. & T. B. 123	T. D. 4020	Dry
Corzelius et al	1-Spicer	T. & N. O. 2	T. D. 3805	Dry
Sweeney	1-Scott	T. & N. O. 2	T. D. 3610	Dry
Wichita County				
Tidal	1-Kemp	K. W. V. 52	T. D. 2003	Dry
Wilbarger County				
Consolidated	2-Waggoner	Poitevant 27	T. D. 2607	Dry
Bridewell et al	10-Stephens	H. & T. C. 83	2286–2292	68
Bridewell et al	9-Dill	H. & T. C. 84	2303–2317	75
Humble	22-Stephens	H. & T. V. 83	2008–2020	20
Young County				
Tex-Unity	6-Hausler	Poitevant	1056–1068	35
Murch-Fain	10-Campbell	T. E. & L. 236	965– 967	175
Welch et al	2-Cathey	T. E. & L. 68	1187–1183	35
Beavers-Bolin	1-Dunagon	T. E. & L. 170	997– 998	118
Gulf	3-Swain	T. E. & L. 161	987– 995	105
Clark-Harbin	1-Boren	Newman	T. D. 1130	Dry
Madden-Wolfe	3-Boren	Newman 9	T. D. 1128	Dry
Oxford	1-Kelcrease	T. E. & L. 1809	T. D. 1030	Dry
Oxford	2-Kelcrease	T. E. & L. 1809	T. D. 1022	Dry

Crude Production by Districts

OKLAHOMA

	Aug. 8	Aug. 1
Cushing	22,400	22,400
Yale	6,800	6,850
Jennings	3,050	3,050
Garber, Billings	11,500	10,900
Tonkawa	53,400	54,600
Blackwell, Braman	22,250	18,050
Thomas	4,300	4,150
North Okmulgee	16,500	16,500
Burbank, Osage county	54,350	54,850
Osage, outside Burbank	33,000	33,150
Healdton	15,400	15,450
Hewitt	14,600	14,600
Duncan	6,700	6,750
Lyons, Deaner	4,400	4,350
Bristow	32,250	32,850
Wewoka	14,200	15,500
Cromwell	31,100	31,650
Graham	9,800	9,890
Stroud	4,250	4,250
Papoose	14,950	15,650
Watchorn	6,000	6,300
Fox	4,150	4,150
Other fields	60,350	60,000
Total	445,700	445,800
Decrease		100

* * *

CALIFORNIA

	Aug. 8	Aug. 1
Long Beach	106,000	106,000
Santa Fe Springs	53,000	53,000
Huntington Beach	44,500	44,500
Torrance	34,000	34,500
Dominguez	28,500	28,500
Rosecrans	22,500	19,000
Inglewood	108,000	110,000
Other fields	279,000	274,000
Total	675,500	669,500
Increase	6,000	

KANSAS

	Aug. 8	Aug. 1
Eldorado, Towanda	14,350	14,350
Augusta, Fox Bush	5,650	5,650
Peabody, Elbing	5,150	5,150
Florence, Covert	2,050	2,050
Rainbow Bend	11,200	11,300
Other fields	68,250	66,850
Total	106,650	105,350
Increase		1,300

* * *

NORTH LOUISIANA

Homer	6,500	6,700
Haynesville	13,000	12,850
Caddo, light	9,000	9,050
Caddo, heavy	2,700	2,650
De Soto, Red River	4,100	4,100
Elm Grove	550	600
Bellevue	3,050	3,100
Cotton Valley	10,650	11,000
Total	49,550	50,050
Decrease		500

* * *

ARKANSAS

El Dorado	8,850	8,800
Smackover, light	27,300	27,750
Smackover, heavy	219,000	201,400
Stephens	1,800	1,800
Nevada	1,550	1,550
Total	258,500	241,300
Increase		17,200

* * *

EASTERN

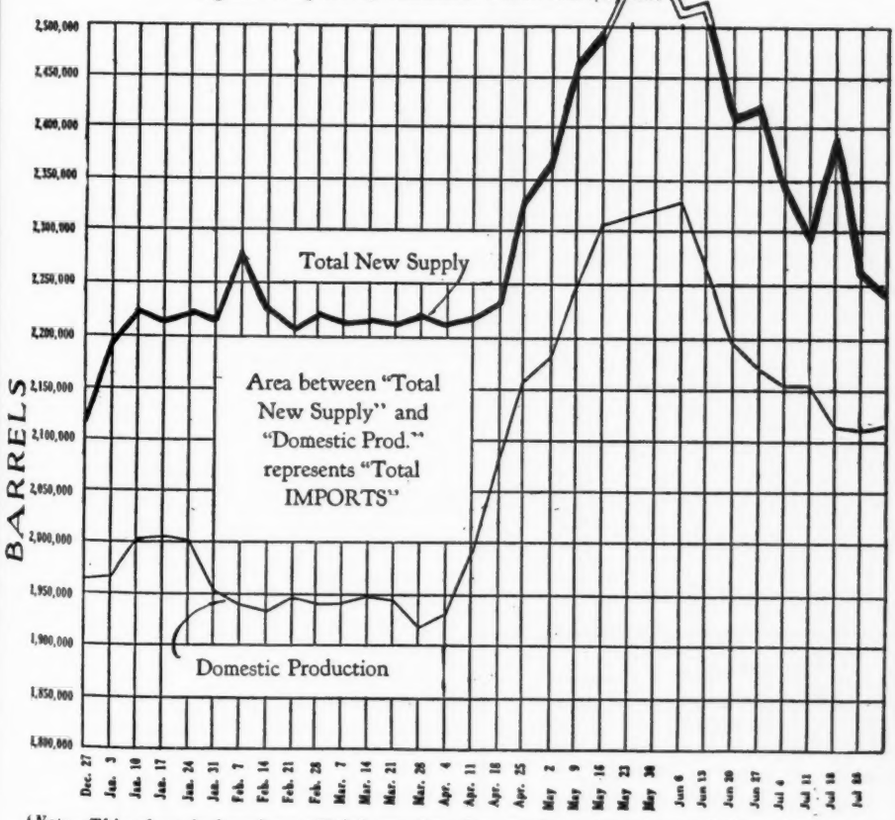
Including Ill., Ind., Ohio, W. Va., Pa., Ky. and N. Y.	104,000	*104,000

*Revised.

(Continued on next page)

DAILY AVERAGE CRUDE OIL PRODUCTION AND IMPORTS

Figures compiled by American Petroleum Institute



(Note—This chart is based on official complete figures of the American Petroleum Institute and is a week later than the production estimates given in tabular form above.)

"CUT OIL"

is a problem in CHEMISTRY

An "emulsion" represents a condition of a liquid which can be fully, scientifically and economically corrected by use of the chemical process. Use TRET-O-LITE process when you have cut oil and tank bottoms that require treating.

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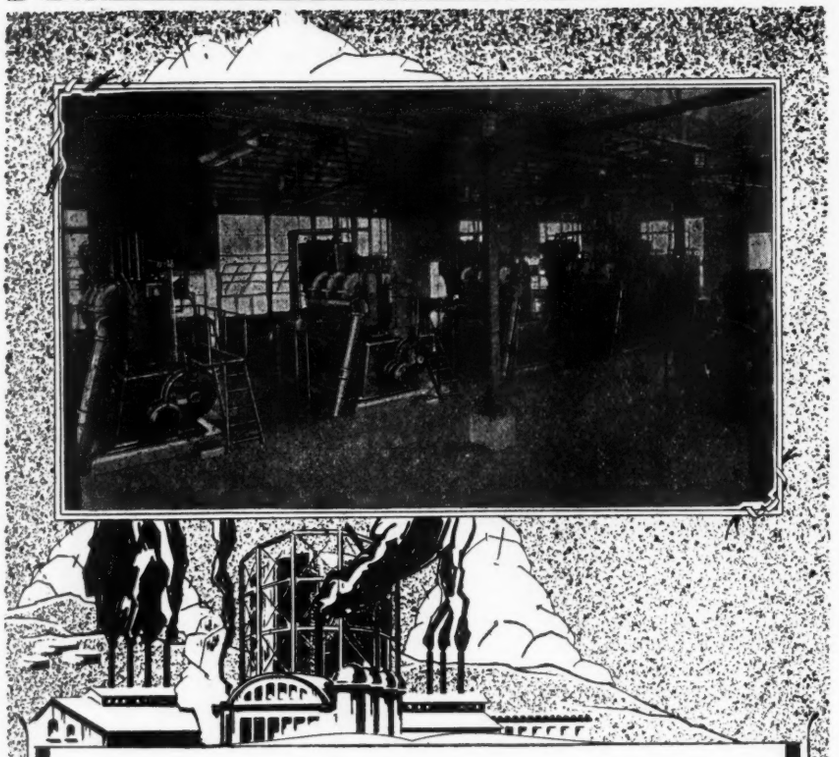
ENGINEERS & CONTRACTORS IN NATURAL GAS AND OIL



A construction contract placed with the Hope Company, in its special field of activity, carries with it a dependable insurance against delay, loss and disappointment.

The Hope organization has "the habit of succeeding" under all conditions. It has never yet failed to make delivery of completed work, on time and right.

The record of the Hope Company as engineers and contractors in the oil and gas industries, is a guarantee of what may be expected from Hope Service by those with problems still to be solved.

HOPE SERVICE

Engineering counsel, design, construction and contracting—in pipe lines for oil and gas, oil pumping stations, gas compressing and boosting plants, gasoline recovery systems, city and intercity gas mains.

UNIT RESPONSIBILITY

H.E.J.

ENGINEERS CONTRACTORS

HOPE Engineering & Supply COMPANY

DESIGNERS MANUFACTURERS

MT. VERNON, OHIO, U. S. A.

(Continued from preceding page)

TEXAS AND COASTAL LOUISIANA

	Aug. 8	Aug. 1
Mexia, Currie, Richland	23,090	23,120
Corsicana, Powell	45,300	46,800
Wortham	27,300	28,600
Wichita Falls district	83,020	82,910
Ranger, lime	25,705	25,575
Ranger, sand*	23,200	22,085
W. Texas; Mitchell, Reagan and Scurry counties	34,985	35,270
Panhandle	3,805	3,890
San Antonio, Luling and Mirando	45,200	44,720
Coastal Texas	84,130	84,130
Coastal Louisiana	10,550	10,360
Total	406,285	407,460
Decrease		1,185

*Includes Young, Shackelford, Brown, Coleman, Callahan, Palo Pinto and Jack counties.

* * *

ROCKY MOUNTAIN

Wyoming		
Salt Creek	59,240	57,800
Teapot	1,565	1,645
Big Muddy	3,410	3,525
Grass Creek	4,150	4,820
Elk Basin	925	835
Greybull, etc.	180	150
Rock Creek	2,880	3,000
Lance Creek	735	725
Poison Spider	1,225	1,200
Osage	470	375
Hamilton Dome	680	685
Mule Creek	775	750
Lander	410	390
Lost Soldier	5,820	5,825
Ferris	90	100
Notches	125	310
Pilot Butte	175	180
Rex Lake	100	430
Total in Wyoming	82,955	82,745
Colorado		
Craig	1,115	690
Fort Collins	1,570	1,245
Boulder	30	25
Florence	250	255
Rangely	100	100
Tow Creek	120	125
Total in Colorado	3,195	2,440
Montana		
Cat Creek	3,550	3,450
Kevin-Sunburst	12,480	9,500
Total in Montana	16,030	12,950
New Mexico		
Artesia	2,525	1,700
Rattlesnake	380	460
Hogback	560	530
Total in New Mexico	3,465	2,690
Recapitulation		
Miscellaneous	200	200
Wyoming	82,955	82,745
Colorado	3,195	2,440
Montana	16,030	12,950
New Mexico	3,465	2,690
TOTAL	105,845	101,025
Increase		4,820

* * *

Production Summary

	Aug. 8	Aug. 1
Prod. East of Rockies	1,476,530	*1,454,985
Increase		21,545
*Revised.		
Total Prod. in U. S.	2,152,030	2,124,485
Increase		27,545

OKMULGEE.—C. L. McMahon, Okmulgee, producer, with his family is spending the summer in Minnesota and at Banff, Canada.

Year-Round Quality Year-Round Profits

STEADY lubricating oil sales and profits---that's what you want. And that's what you can have with Elliott Jones Straight Distilled Year-Round Oils.

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Please send samples, prices and full information on the Elliott Jones Line of Year-Round Oils to:

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More Useful Information On Grease Making

CHICAGO, Aug. 6.

Editor of National Petroleum News,
Dear Sir:—

THE article on grease in your July 15 issue, page 82, by J. E. Babb is the best thing on this subject that we have ever seen in print. One point might have been made clearer for your readers. The soda content for the soda greases is comparatively simple. The 76 caustic soda is bought on specification and the ordinary man can check with the hydrometer and a saponification table and know just how much soda to use in converting each kind of fat to soap. But how about the lime for the calcium greases, where a chemist is not available?

We understand that commercial hydrated lime may be composed largely of gypsum, magnesia, etc., and many things besides calcium, and that there are very few dependable sources for hydrated grease lime in the country. We believe it would help to point out that it is the rule to buy lime on as careful specifications, as say, potash, which is sold within the range of 88 to 92.

It is possible now to buy lime already hydrated guaranteed to run 96 to 98 per cent calcium, and using such a grade the operator knows that of two sacks totaling 100 pounds, 73 pounds will be active calcium, the saponifying factor he is interested in. Of the other 27 pounds not less than 23 pounds is water in combination, due to the hydrating or "slacking."

Had standard terms been used in place of "hard, medium, soft," to designate the three grades of calcium grease mentioned, comparative values would have been simpler. No. 5, the hardest referred to in Bureau of Mines technical paper No. 305, calls for but "approximate 24 per cent calcium soap." This includes fat and lime.

Of the common standards 5-4-3-2 and 1, little of the hard is used while, due to new pressure gun systems of lubrication, the soft grades reduced with heavy red oils are becoming of much more interest than formerly.

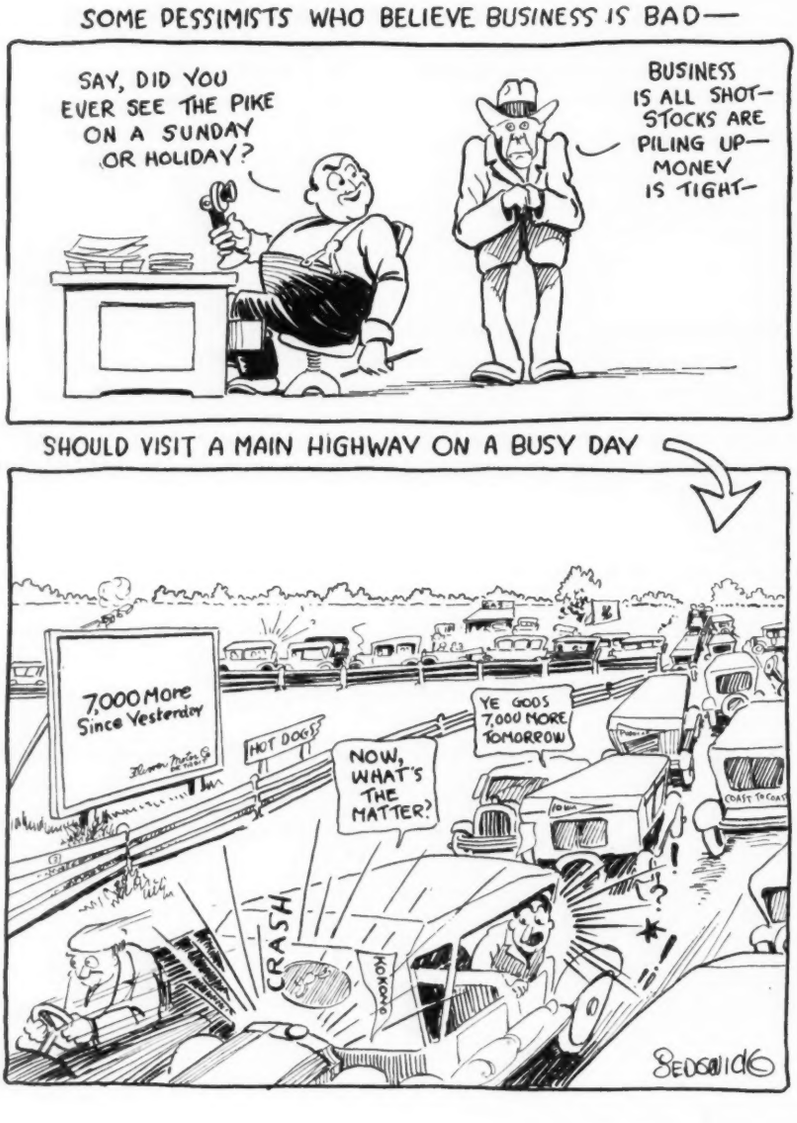
The manufacturing processes shown in the articles are good, petroleum being one of the very few things that will dissolve lime, we find that in starting a batch of calcium grease by mixing the lime in a little 28 paraffine oil (non-viscous neutral) gives the best results. Usually there is already enough water in the lime and fat, just as it is bought, to carry on saponification. If not, and the fats used are "sweet" (oils), a little water added will increase the activity of the mixture. With the usual run of packing house fats we use no water whatever until that of hydration is added in finishing; this quickens the process one-half the time and no straining is necessary if clean materials are used.

The soda process shown, we have used for automobile transmission grease, the "stringy" variety, taking 100 pounds of fat for a 4000-pound batch, using a minimum of water in the soda solution, low heat, and reducing first with 50 gallons of non-viscous neutral, finishing with 450 gallons of a heavy viscous cheap residual oil, western or southern preferred, the latter for winter use.

We believe that a scientific paper addressed to technologists often leaves information obscure to the average reader that would otherwise be of value to him.

F. E. Martin.

THE accompanying letter, called forth by the recent article by J. E. Babb of the Waverly Oil Works Co., on grease making, which was published in N. P. N., has been received from Mr. Martin. He also has had a great deal of experience in the manufacture of lubricating greases and he adds some hints to those set forth by Mr. Babb.


SOME DESSIMISTS WHO BELIEVE BUSINESS IS BAD—
SAY, DID YOU EVER SEE THE PIKE ON A SUNDAY OR HOLIDAY?
BUSINESS IS ALL SHOT— STOCKS ARE PILING UP— MONEY IS TIGHT—
SHOULD VISIT A MAIN HIGHWAY ON A BUSY DAY
7,000 More Since Yesterday
HOT DOGS
NOW, WHAT'S THE MATTER?
YE GODS 7,000 MORE TOMORROW
CRASH
SEDGWICK

Tide Water's Southeastern Salesmen Have Meeting

NEW YORK, Aug. 6.—At the semi-annual sales meeting of the southeastern department of the Tide Water Oil Sales Corp., which was recently held at the Rittenhouse Hotel, Philadelphia, sales records of the various salesmen in the department for the first six months of the year were posted and the department's plans for the last half of the year outlined, according to G. M. King, editor of "The Spade", the company's house organ.

F. D. MacEachern, manager of the southeastern department since last October, and who was formerly the company's sales training supervisor, directed the meeting.

Among the speakers were: R. W. Mowry, Philadelphia sales supervisor; G. D. Burgevin, eastern Pennsylvania sales supervisor; G. Fash, special representative; and Mr. DeHart and Mr. Reed, of the accounting and credit department.

EAU CLAIRE, WIS.—The Cities Service Oil Co., has bought the Enterprise Oil Co. of Eau Claire, Wis., a distributing company.

THE EDITORS' VIEWPOINT

Why Not a Differential to Tank Car Buyers?

NATIONAL PETROLEUM NEWS' investigation into the cut price selling of gasoline by industrial concerns, from pumps and tanks beside the railroad siding on plant property, has disclosed it to be the greatest cause of upset local retail markets—and an unfair cause when you get down to it.

The industrial concern makes hay on a low tank car market, when there is a wide margin below the retail price. It sells cut price, sometimes as a profitable sideline venture of certain individuals, sometimes posing as a public benefactor by selling to its employes and the public below what the oil companies can sell for.

The concern recognizes no responsibilities to the public. When the margin becomes too narrow it quits the gasoline business. In the long run, and considering the time and thought that must be given to the gasoline end of the business by some officials in the concern, it is doubtful if the industrial concern is anything ahead either in profits or public good will through the gasoline venture.

The price rebate system the Standard Oil Co. of Indiana recently put into effect, will probably help this situation somewhat, because it tends to give the quantity purchaser of gasoline a price concession which he is probably entitled to, inasmuch as such concessions are generally recognized in the business world. The big consumer who has heretofore had the alternative of buying at the tank wagon price, or putting in his own storage and buying in tank cars, if he saw enough of a saving by using the latter method, now is openly offered 1½ cents under the tank wagon price if his volume of deliveries is large enough. Or his trucks and salesmen's cars can buy at the oil company's service stations at 1½ cents under the published retail price if he is a large enough consumer of gasoline.

While these concessions are not so large as have been offered surreptitiously in the past and are now being offered, they have the advantage of being done openly, with a guarantee of continuing during the year at any rate. They have a stability and recognition that has in the past been denied them by the oil industry. Once recognized, competition between companies is likely to establish these differentials at the point where they will tend to keep the purchaser in a defined class as a gasoline purchaser and not make it so alluring for him to change his method of purchasing to obtain another price differential.

However, the cut price selling by industrial concerns and its consequent engendering of the public's ill will against the oil industry, will continue to a great extent as long as the industrial concern can buy at exactly the same tank car price as the established oil marketing company, which has its overhead expense in trucks and stations, and its responsibility to the public to continue in business regardless of whether it can sell at profit or must do so at a loss. It would be a great stabilizing influence in retail marketing circles the country over if this principle the Standard of Indiana has recognized of open concessions to various classes of purchasers could be extended to recognize that a purchaser of wholesale tank car lots who buys for strictly resale purposes, is entitled to the protection of a differential below the big plant or factory which buys in tank car lots for its own use or to merely dabble in the retail market.

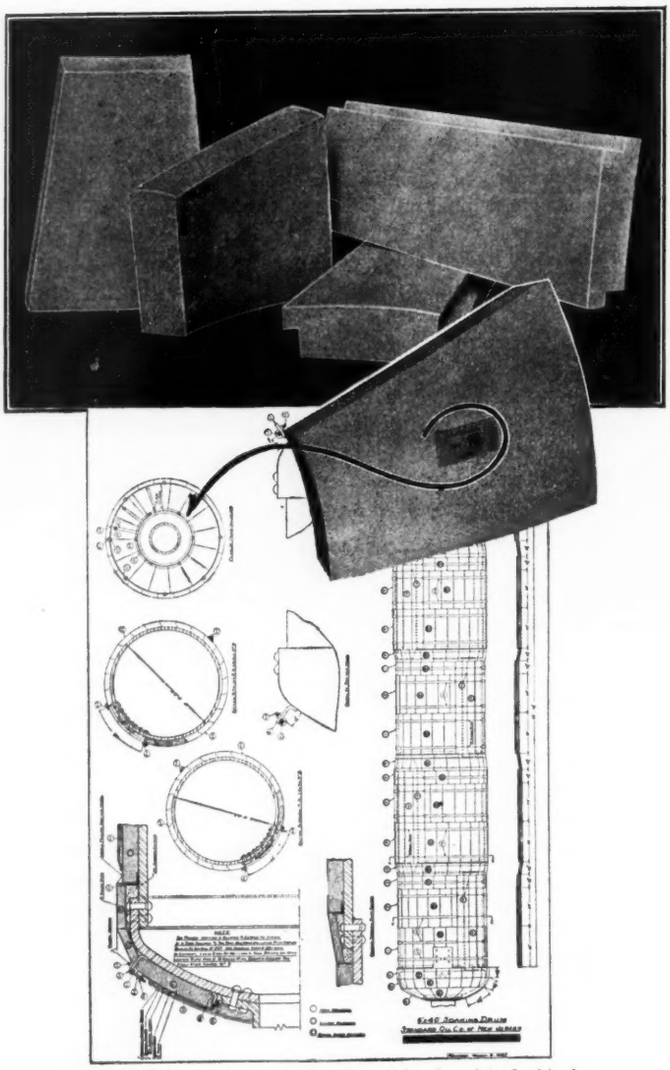
The Standard of Indiana, while taking within the last few weeks a step which should tend toward greater stability in retail markets, unless its policy is changed in this regard, will continue to sell a big consumer in tank car lots at the same price the oil marketing company pays, thereby opening the widest avenue for a price disturbance. Other Standard companies and national marketers of gasoline follow the same practice. In fact the investigation of National Petroleum News has shown that these big interests have been the first to sell the big consumer at the tank car price, making a wobbly price structure for the local oil jobbing company to proceed against, as well as their own local agents.

It can hardly be denied that the industrial plant which is a sufficient consumer of gasoline to buy in tank car lots, should be encouraged to do so. That is the most efficient and economical way of supplying that gasoline. However, there is nothing in the practice of other lines of business which would establish that these big industrial concerns should buy at the same price as the local gasoline distributor. Yet these concerns make much of the fact that they can go to any of several sources and buy even one tank car of gasoline, to be delivered about at their convenience, at the tank car prices published in National Petroleum News or any other periodical, as indicating that there is a wide margin of profit in the tank car gasoline business, or that the oil companies can buy for resale purchase at less than the open tank car price. They can hardly comprehend that they can go to almost any refinery source for an occasional tank car of gasoline at the same price exactly as the oil jobber buying in quantities regularly, must pay.

If such an industrial concern could purchase at say 2 cents a gallon over the price in tank cars the established jobbing company pays, it would still be an inducement for that company to buy in tank car lots if the volume it used were large enough yet the opportunity would not be so alluring for the company to branch out into the gasoline retailing business on a cash and carry basis, either for profit or posing as a benefactor to the public by selling at 5 or 6 cents under what the oil companies have to charge to make a normal profit

Unfortunately, more than the announcement by one company is needed to put such a tank car differential into effect, and such a move could hardly be accomplished over night. If the national marketing companies were to eliminate their practice of quoting anyone who applies at a tank car price based on the Group 3 refinery market, which is the price the established jobbing company must pay pretty much over the country, and insist that that quotation applied only to the company which could show facilities for handling the material for resale, it is likely that the Independent refiners in due course would follow and such a differential would be generally recognized. The same volume of gasoline would be sold and the chances are it would be distributed as equitably among the different refining sources and what always contains possibilities of a bad price situation, would be eliminated.—V. B. G.

Just "Insulation" Won't Do
Stills Need *Still* Insulation



The top view shows specially shaped head and body blocks of Nonpareil Still Insulation.

The labelled block in the center is for the soaking drum, details of which are shown in the drawing below showing the Nonpareil method of insulating a Soaking Drum.

Drawings such as these are made for every pressure unit in the refinery and are furnished free for each installation.

Ordinary insulation is not designed for pressure units. On the other hand, Nonpareil Still Insulation is made especially for them—made to fit them structurally, and made to stand their operating conditions.

Here are some of the advantages of Nonpareil over other insulations:

1. Greater heat-retarding value than any other insulation practicable for pressure stills;
2. Permanent insulation because it retains its efficiency unchanged and undiminished at temperatures in excess of 1000° Fahr. Will not calcine or burn out;
3. Structural superiority because it is made in blocks molded and machined to fit the various parts of the pressure unit;
4. Working drawings that detail every item—clips, angles, bolts and bands, and the location of the blocks on body, heads and over the rivet courses. They eliminate the necessity of your working out these details yourself.

Before you insulate another unit, investigate the Nonpareil method. The coupon will bring you full information and a sample block.

Armstrong Cork & Insulation Company
Division of Armstrong Cork Company
159 Twenty-Fourth Street Pittsburgh, Pa.

Nonpareil Still Insulation

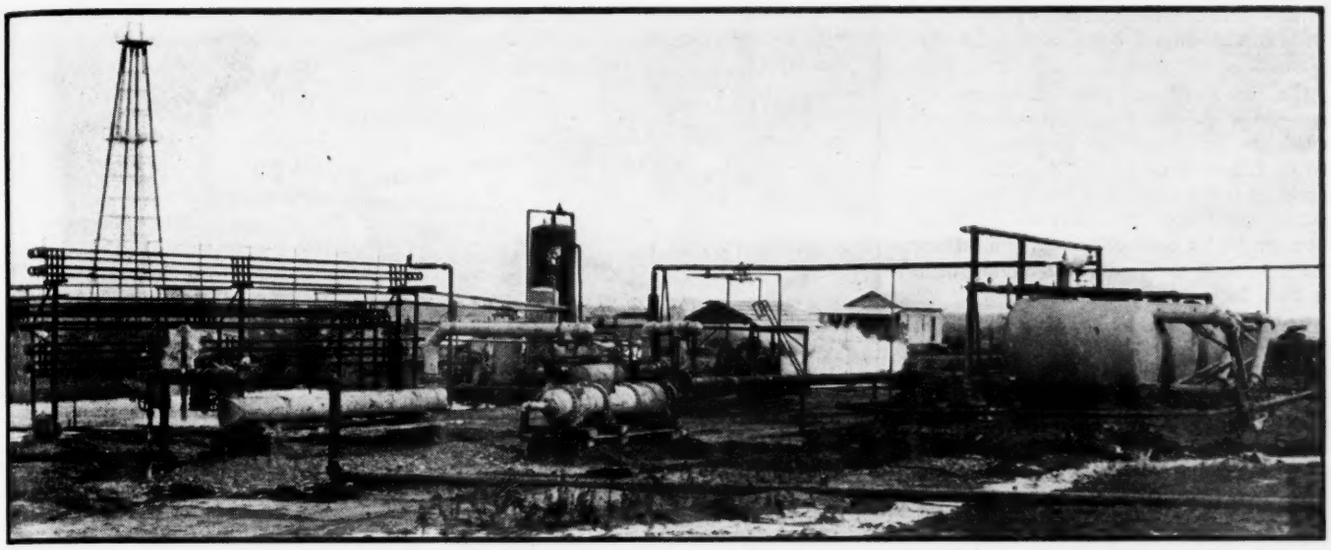
Mail The Coupon Today

Armstrong Cork & Insulation Company,
159 Twenty-fourth Street,
Pittsburgh, Pa.

Gentlemen: Please forward a sample Nonpareil Still Insulation Block and the book "Insulation 200°-1500° F."

Name.....Address.....

City.....State.....



Geneanl view of Skelly's experimental charcoal plant which is now making 2500 gallons of gasoline per day from one well

Charcoal Absorption Plant Set Up in 8 Days Making Money From Gas of One Well

By J. C. Chatfield
N. P. N. Staff Writer

TULSA, Aug. 6

THROUGH the successful operation of a small charcoal absorption plant treating rich natural gas from one well in a new field, Skelly Oil Co. has made a discovery which is of prime importance to oil producers and manufacturers of natural gasoline. The plant is extracting gasoline from the gas produced by Skelly's No. 1 Ford in the NEc of 7-15-6 near Stroud. The well opened a new Wilcox sand pool when it was drilled in about the middle of June. To date it is still the only well producing in the field and is making around a million cubic feet of gas and 1,200 barrels of oil per day.

In the past when a new oil field has been discovered it has not been possible to build a plant and begin making gasoline from the casinghead gas in much less than a year. Gasoline from rich flush gas necessarily has had to be wasted because of the time which has been needed whether there would be sufficient gas to operate a plant economically. Added to this it has taken time, of course, to order material and build the plant.

Heavy losses have frequently been taken by manufacturers who overestimated the supply of gas to be obtained in a flush field and built too large a plant. While manufacturers try to get their plants in as soon as possible there has been a tendency to make more careful studies before building. At least one company makes a study of decline curves and builds for a future diminished supply of gas in the new fields it enters.

Record Installation

Contrasted with the normal period of six months to a year to start a gasoline plant in a new field, the Skelly plant was producing 2,500 gallons a day of Grade Double A gasoline from the Stroud discovery well within eight days after it was determined to make the experiment. The well is still much less than two months old and the plant is running smoothly.

Every storage tank available on the lease is full and as a temporary measure pending arrival of more tanks and the building of a six-mile line and loading rack, it has been necessary to store gasoline in the scrubber tank. The plant has been in operation two weeks and there is now around 34,000 gallons of gasoline in storage on the lease.

Gasoline manufacturers in the Mid-Continent field have taken an intense interest in the Skelly experiment. Every day during the past two weeks the plant has been visited by parties of manufacturers and their technical men.

The plant is an entirely new application of the charcoal absorption process. G. G. Oberfell, one of the inventors, has consistently maintained that charcoal could be used efficiently on rich gas and tests have been made in a small way on two-gallon gas but there has never before been a commercial installation to operate on rich gas. The charcoal process has been used up to now as an auxiliary to large oil absorption plants and on lean gas such as that being transported from field to city for industrial and domestic use.

Emby Kaye, general superintendent of the gasoline department of the Skelly Oil Co., ordered a charcoal plant for use at the company's Burbank oil absorption plant some time ago. The installation was designed to produce 750 gallons of gasoline per day operating on two hour cycles. Since gas production in the Burbank field has declined to a point where the Skelly plant was not overloaded, the charcoal plant has not been needed for efficient gasoline extraction.

Rich Gas From Well

A test of the gas being produced by the Ford well showed a gasoline content of 2½ gallons per 1000 cubic feet. When this information came to hand Mr. Kaye determined to make the experiment of using his surplus charcoal plant on the rich gas produced by the new well. He ordered the plant cut down and moved to the new location.

To facilitate the moving of the plant, workmen did not disturb the heavy fittings. Instead they attacked the lines with oxy-acetylene torches and cut them into convenient lengths between connections. Each of the three charcoal absorbers was loaded on a motor truck and sent overland to Stroud, a distance of about 95 miles. All other equipment

needed for operation of the plant was loaded into two freight cars and dispatched.

On the Ford lease the plant was reassembled quickly since fittings did not need to be installed and made gas tight. Lines were welded back together again at the points where they had been cut at Burbank. The two boilers, four storage tanks and coils were used for the first time at Stroud not having been in that form at Burbank.

There is not a block of concrete at the Stroud plant. It has been set up and put into service on wooden blocks. Even the lone compressor, a 60-horse power Ingersoll-Rand, whirls merrily away on a couple of rig timbers. In the eight days which elapsed from the time the plant at Burbank was attacked by cutting flames until it began making gasoline at Stroud there was not time enough to lay out a ground plan, pour concrete footings or build structures to house the equipment. It stands out on the prairie, not looking much like a gasoline plant but making good just the same.

Smile If You Wish

Arthur Ayvazian, construction engineer in the gasoline department who has been in charge of moving, and rebuilding the plant at Stroud under Mr. Kaye's direction, does not object to visitors smiling at his engine room which consists of 10 pieces of 1 by 12 planking laid up on 4 by 4 standards to protect its one little compressor. He remarks that it may be necessary to clean the windows and then joins the visitors in a laugh. "You may smile if you wish," he says. "The important thing is that it makes gasoline."

The three 6 by 8 foot absorbers shown in Fig. 1 contain 7000 pounds of activated charcoal. At Burbank they were operated on a two hour cycle. One was absorbing, one on steam to drive off the gasoline and one being cooled by residue gas. At Stroud this cycle has been reduced to 30 minutes and it is planned to try out a 20-minute cycle to see how that will work out. Gas enters the system at about 5 pounds pressure per square inch. This pressure is provided by the well, no compressing being needed.

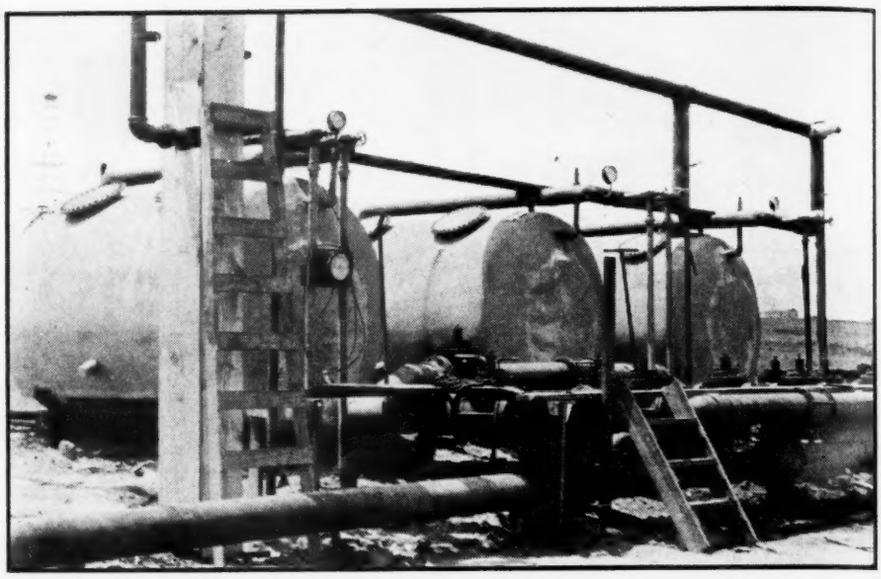


Fig. 1. Three charcoal absorbers at Skelly plant on wood blocks. Each absorber contains 2300 pounds of charcoal

The three absorbers are handling 950,000 to 1,000,000 cubic feet of gas per day from the one well. Since the scrubber tank has been pressed into service as a storage tank temporarily, the gas enters the absorbers through a bypass direct from the large American Tank Co. oil and gas separator. No oil has been carried into the system but the operators will feel a bit safer when they get a scrubber tank between absorbers and separator in the next few days.

Thirty Minute Cycle

When residue gas is turned into the absorber after the 30-minute charge of steam it leaves the absorber at a temperature of around 210 degrees. F. The gas is cooled in a Braun cooler before being used for drilling adjacent wells. At the end of the 30 minute cooling cycle the gas leaving the absorber is down to a temperature of 135 to 145 degrees F.

In the past it has been thought necessary in the operation of charcoal plants to cool the charcoal considerably below 135 F. before gas was turned in again to start the absorption cycle. But tests of residue gas from the plant show a gasoline content of only 60 to 66 gallons per million cubic feet which is a much greater efficiency than is obtained in normal gasoline plant practise.

The one compressor at the plant is utilized to recompress vapors from storage tanks and uncondensed gasoline vapors. Two oil field boilers provide steam for the entire system and two small steam pumps handle water circulation. A large Roots rotary pump was brought down to the plant but has not been found necessary as yet.

Cooling Coils

There are four cooling coils in the coil pit in addition to the Braun gas cooler mentioned above. One coil condenses steam out of the mixture of gasoline vapors and steam coming from the charcoal absorber. A second coil condenses the gasoline vapors from the drip tank, another cools the gasoline before it is run to storage and the fourth condenses recompressed vapors.

Fig. 2 is a view of the coil pit with accumulator tank, make tanks and drip tank in the foreground. Condensed steam is separated from the gasoline vapors in the drip tank shown in the center, the water being trapped out to the coil pit and the gasoline vapor carried on to the next condensing coil. A line is provided to take off any gasoline which condenses in this tank. The smaller tank to the right with the loaded relief

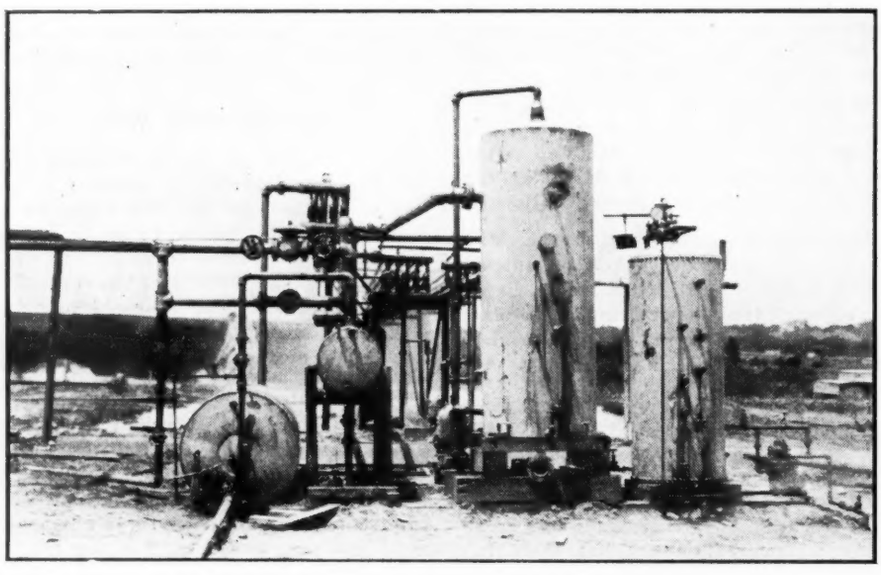
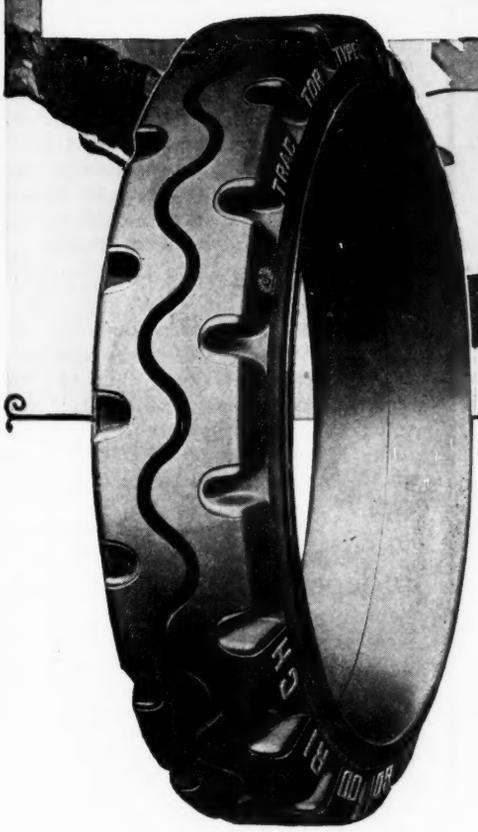


Fig. 2. Coil pit with drip tank, accumulator tank and make tanks in foreground

Meet Excavating Test . . . . We are motor transportation engineers specializing in dump work, such as hauling building materials, road work and general excavation; a line of business that will subject any solid tire to as severe a strain and test as is possible . . . . Our first Goodrich De Luxe Tractors are now on their 14,000th mile, despite decidedly hard usage and abuse. This performance, together with wonderful resilience and traction, have resulted in our now having nine of our fleet De Luxe Tractor equipped. **Pawton & Martin, Cleveland, Ohio.**



"Best in the Long Run"

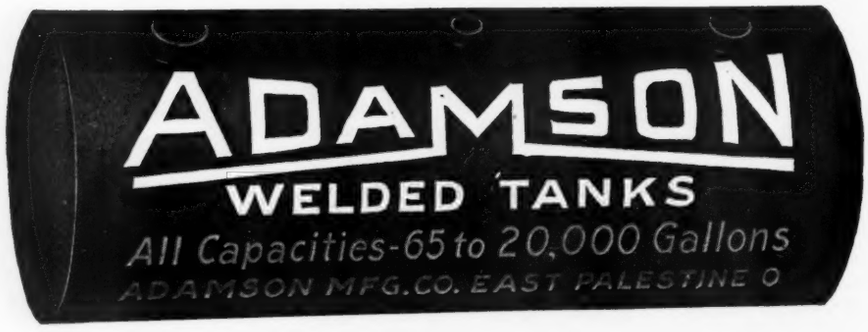
They Dig in for Profit

Traction is the crying need in all heavy duty trucking and long hauling . . . . Traction is the other name of the Goodrich Tractor-Type Cushion Tire . . . It grips and carries the load . . . . Its unusual performance in excavating, on up-hill pulls, in all kinds of exceptional work, is praised in scores of letters from men who have benefited by the unique working character of Goodrich Tractors.

To round out economical and efficient service in the operation of trucks and buses, Goodrich provides the famous De Luxe cushion smooth type, Goodrich Semi-Pneumatics and Goodrich Silvertown Heavy Duty Cords.

THE B. F. GOODRICH RUBBER COMPANY, *Akron, Ohio*
In Canada: The B. F. Goodrich Rubber Company, Ltd., Kitchener, Ontario

Goodrich
De Luxe TRACTORS



GULF Refining Company

General Sales Offices
PITTSBURGH, PA.
District Sales Offices
New York, Houston, Atlanta, Boston, New Orleans, Tampa, Philadelphia

REFINERS OF OKLAHOMA TEXAS AND LOUISIANA

PETROLEUM

REFINED OIL
GASOLINE
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT

Fuel Oil--Lubricating Oils

CYLINDER ENGINE CORDAGE

RED AND PALE PARAFFINE OILS

valve at the top is the accumulator tank for recompressed gasoline.

The picture on the cover of this issue shows Mr. Ayvazian having his picture snapped by the writer in front of the coil pit and main compressor room. In the background is the derrick over the Ford No. 1 well from which the gas is drawn. The intake line from the scrubber tank to absorbers in the foreground shows two of the welds which were made in setting up the plant and the fittings undisturbed on the trip.

As mentioned above, the plant originally was not designed to operate on rich gas or to have any portable features. Since the experiment has proven a success Mr. Ayvazian has set to work to design a charcoal absorption plant which will be much more easily moved from place to place. It appears probable that in the future it may be possible to begin making gasoline in every new field within two or three weeks after the discovery well has been brought in. In the present case the gasoline production obtained in the first eight days of operation paid the entire cost of moving the plant from Burbank to Stroud.

Moving cost of the plant was approximately $1,500. Since well pressure is sufficient to carry gas through the system the investment cost is much lower than would be necesssary in an old field. It is estimated that the plant as constituted at present represents an investment of approximately $30,000 or only about $12 per gallon of production per day.

Independent O. & G. Gains In First Quarter

CLEVELAND, Aug. 8.—Gross earnings of the Independent Oil & Gas Co. for the second quarter of 1925 are three times the gross for the corresponding quarter of 1924 and net available for reserves and surplus is more than four times as great. Income for the first half year available for reserves and surplus is more than double first half of 1924. Condensed reports for the two second quarters follow:

	1925	1924
Gross earnings	$1,822,532	$601,840
Net aft. exp., tax, etc.	1,377,327	290,895
Interest & discount	4,333	3,865
Inc. avail for surp. & res. before fed. tax	$1,372,994	$294,760

Statements for the two half years follow:

	1925	1924
Gross earnings	$3,146,948	$1,664,920
Net after expense, tax, etc.	2,401,101	1,085,939
Interest & discount	7,146	3,193
Inc. avail for surp. & res. before fed. tax.	$2,393,955	$1,089,132

QUINCY, ILL.—Sinclair Refining Co. has just completed a bulk station here.

Dubbs Interests Issue Statement On Patents and Warning

CHICAGO, Aug. 6

THE Universal Oil Products Co., owner of the Dubbs cracking process has issued to the industry a statement of its patent position and a warning against infringement. The statement says that it is the company's purpose to give ample notice of its claims to everyone concerned so that no one can infringe unknowingly and that "it will proceed by orderly legal proceedings to protect its rights."

Whether the statement heralds a general legal attack on companies that are using any of the principles or features that are used in the Dubbs process, is not known. Very broad claims are made in the statement. Among them, exclusive use under patents is claimed for the principle of pumping charging stock into the top of the dephlegmator, recycling the reflux from the dephlegmator by means of a pump, bubbling the vapors through pools of oil which is the basis of all bubble tower operation, and the principle of reflux in general.

Whether the company contends that it has exclusive rights to these features as regards distilling at atmospheric pressure or whether its claims are limited to the use of these methods in cracking under pressure, the statement does not say.

Even the coke formed in the process is patented.

The statement, which announces that the elements in the process consist of a pipe still; an enlarged expansion chamber; a dephlegmator; a condenser and operation under self generated pressure, as defined in patent No. 1,123,502, goes on to list its claims under later patents as follows:

1—The return of the reflux condensate to the system for further treatment as defined in the claims of issued patent No. 1,392,629.

2—The return of the reflux condensate to the system for further treatment by forced (mechanical) means (pump) as defined in the claims of issued patent No. 1,525,281.

3—Controlled dephlegmation of the vapors as defined in the claims of issued patent No. 1,484,445.

4—The "overhead feed" of the charging stock as defined in the claims of issued patent No. 1,488,325.

5—Operation at differential pressures in the system as defined in the claims of issued patent No. 1,534,927.

6—The passage of independently heated streams of charging oil and reflux condensate to a common vaporizing zone as defined in claims of issued patent No. 1,537,593.

7—The "split feed" of the charging stock, part overhead, part direct to the heating elements as defined in claims in issued patent No. 1,522,425.

8—The passing of the heated oil through a series of heated vaporizing chambers as defined in the claims of issued patent No. 1,440,772.

9—Passing the oil in a closed cycle through the heated element and expansion chamber with recracking of reflux condensate and withdrawal of heavy residuum as defined in the claims of issued patents No. 1,534,927 and No. 1,281,884.

10—Bubbling the vapors through oil pools in the dephlegmator with heat interchanged with the charging stock as defined in claims of issued patents No. 1,488,325, No. 1,525,281 and No. 1,546,634.

11—A coke-like carbonaceous fuel produced by cracking as defined in the claims of issued patent No. 1,517,830.

The company also states that it has over 700 patent applications pending.

Inexpensive Application of Air Blast Simplifies Fullers Earth Handling

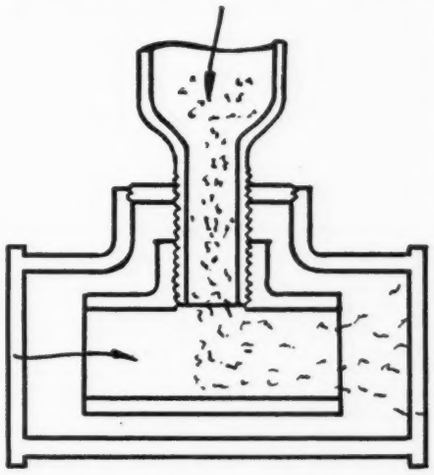
CORAOPOLIS Aug. 7.—An interesting feature of the Canfield plant here is the method developed by John Coleman, the filter foreman, for transporting the burned fullers earth from the retorts to the storage bins. This was done at this plant for many years by an antiquated chain conveyor which gave a good deal of trouble due to breakage of the chain and so on.

Mr. Coleman hatched the idea that the earth could be conveyed to the storage bins by a blast of air. Not even a compressor would be necessary, he figured, to do the work. He worked out his idea as is shown in the accompanying drawing.

A five-inch pipe leads from a chamber at one end in which is installed an 18-inch blower operated by a small motor. There is an inverted T in this pipe under the retort with the stem extending upward to receive a pipe that carries the earth, trickling down by gravity from the retort. The downward pipe from the retort empties into a small T within the larger pipe and parallel to it, the ends of the T open at both ends.

As the grains of earth fall into the smaller T the blast of air from the blower catches them and whirls them up the five inch pipe that leads to the storage bins at the top of the filter house. The distance travelled by the hot earth cools it to a temperature that it is safe to put into the storage bins.

The cost of this device was trifling and it has not caused a bit of trouble or expense for upkeep since it was put in operation. The only thing that had to be bought for it were the blower and its little motor.



The simple device used at the Canfield refinery to convey earth from the burners to the storage bins by air pressure. The clay is shown dropping from the retort into the inner T which is open at both ends. The air blast, entering from the left, forces the clay out of the T at the right and up a pipe, which is not shown, to the storage bin.

Oil Patents Issued July 29-Aug. 4

Production

Elevator—Hewlet T. Smith, Oxnard, Cal., assignor to Dunn Manufacturing Co., Oxnard. Filed March 26, 1923. No. 1,548,337.

Cleaning Outlet for Oil Storage Tanks—Frank A. Walker, Wichita Falls, Tex. assignor of one half to Cletus C. Connolly, Wichita Falls. Filed July 28, 1923. No. 1,548,400.

Rotary Jar—James A. Kammerdiner Los Angeles. Filed Dec. 16, 1924. No. 1,548,529.

Underreamer—Ervin H. McClease, Long Beach, Cal. Filed July 27, 1923. No. 1,548,541.

Well Equipment—Joseph F. Moody, Tulsa. Original application filed April 17 1922. Divided and this application filed Feb. 27, 1925. No. 1,548,543.

Hydraulic Rotary Underreamer—Benjamin F. Blanchard, Brea, Cal. Filed June 9, 1922. No. 1,548,578.

Well Pump—Thomas J. Cotton, Burkburnett, Tex., assignor to Lester D. Mowrey, Burkburnett. Filed Feb. 27, 1924. No. 1,548,802.

Combination Gas Anchor and Sand Trap—Thomas J. Cotton, assignor to Lester D. Mowrey. Filed Oct. 11, 1924. No. 1,548,803.

Barrel Valve—Lester Daniel Mowrey, Burkburnett, Tex. Filed Oct. 24, 1923. No. 1,548,805.

Refining

Oil Heater—John E. Bell, Brooklyn, N. Y., assignor to Poers Specialty Co., New York City. Filed July 3, 1920. No. 1,548,343.

Natural Gasoline

Process of Recovering Absorbable Constituents from Gas Streams—Arthur B. Ray, Bayside, N. Y., assignor to Carbide & Carbon Chemicals Corp., New York. Filed Nov. 12, 1924. No. 1,548,280.

Miscellaneous

Retort for Distilling Carbonaceous Materials—Albert Giger, Vancouver B. C. Filed June 28, 1922. No. 1,548,307.

Method and Apparatus for Treating Oil (Reclaiming used oil)—Walter S. Moody, Pittsfield, Mass., assignor to General Electric Co. Filed Aug. 15, 1924. No. 1,548,733.

Refinery Products Directory

Gasoline and Naphtha

ARKANSAS

58-60 U. S. Motor Gasoline
★Imperial Oil Mktg. Co., Tulsa, Okla.

CALIFORNIA

42-45 Engine Distillate 445-480 E. P.
Hercules Gasoline Co., Los Angeles, Calif.

ILLINOIS

58-60 U. S. Motor Gasoline
Indian Refining Company, Lawrenceville, Ill.

KANSAS

60-62 420-430 E. P. Gasoline
★Skelly Oil Co., El Dorado, Kansas
64-66 375 E. P. Gasoline
★Skelly Oil Co., El Dorado, Kansas

KENTUCKY

46-48 500 E. P. Naphtha
Great Southern Refining Co., Lexington, Ky.
50-52 450 E. P. Naphtha
Great Southern Refining Co., Lexington, Ky.
56-58 437 E. P. Gasoline
Great Southern Refining Co., Lexington, Ky.
58-60 Navy Gasoline
Great Southern Refining Co., Lexington, Ky.
58-60 Motor Gasoline
Great Southern Refining Co., Lexington, Ky
64-66 400 E. P. Straight-run Gasoline
Ashland Refining Co., Ashland, Ky.
Great Southern Refining Co., Lexington, Ky.
68-70 Straight-run Gasoline
Ashland Refining Co., Ashland, Ky.

NORTH LOUISIANA

58-60 U. S. Motor Gasoline
Caddo Central Oil & Refining Co., Shreveport, La.
Louisiana Oil Refg. Corp., Shreveport, La.
Shreveport Prod. & Refg. Co., Shreveport, La.

NORTH TEXAS

56-58 450 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.
58-60 U. S. Motor Gasoline
Panhandle Refining Co., Wichita Falls, Tex.
Sunshine Consolidated Oil Co., Wichita Falls, Tex.
58-60 450 E. P. Gasoline
Noble Oil & Gas Co., Tulsa, Okla.
Panhandle Refg. Co., Wichita Falls, Texas
Texhoma Oil & Refg. Co., Wichita Falls, Texas
60-62 400 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.
64-66 390 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.
64-66 375 E. P. Gasoline
Sunshine Consolidated Oil Co., Wichita Falls, Tex.
68-70 350-360 E. P. Gasoline
Noble Oil & Gas Co., Tulsa, Okla.

OKLAHOMA

50-52 450 E. P. Naphtha
Cameron Refg. Co., Ardmore, Okla.
56-58 450 E. P. Gasoline
Bolene Refg. Co., Enid, Okla.
Cameron Refg. Co., Ardmore, Okla.
58-60 450 E. P. Gasoline
Bolene Refg. Co., Enid, Okla.
58-60 U. S. Motor Gasoline
Bell Oil & Gas Co., Tulsa, Okla.
Bolene Refining Co., Enid, Okla.
Cameron Refg. Co., Ardmore, Okla.
★Imperial Oil Mktg. Co., Tulsa, Okla.
L. O. Carter Co., Tulsa, Okla.
60-62 400 E. P. Gasoline
L. O. Carter Co., Tulsa, Okla.
64-66 390 E. P. Gasoline
Bolene Refg. Co., Enid, Okla.
64-66 375 E. P. Gasoline
Altitude Petroleum Co., Tulsa, Okla.
Bell Oil & Gas Co., Tulsa, Okla.
★Imperial Oil Mktg. Co., Tulsa, Okla.
Lubrite Refining Co. ,St. Louis, Mo.
68-70 350 E. P. Gasoline
Bell Oil & Gas Co., Tulsa, Okla.

PENNSYLVANIA

50-52 Naphtha
Emery Mfg. Co., Bradford, Pa.
52-54 Naphtha
Lucinda Refining Co., Lucinda, Pa.
54-56 Naphtha
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.
58-60 Gasoline
Carnegie Refg. Co., Carnegie, Pa.
★Continental Refining Co., Oil City, Pa.
Independent Refining Co., Oil City, Pa.
58-60 Straight-run Gasoline
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.
60-62 Straight-run Gasoline
Bradford Oil Refg. Co., Bradford, Pa.
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.
62-64 Straight-run Gasoline
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.
64-66 Straight-run Gasoline
Bradford Oil Refg. Co., Bradford, Pa.
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.
68-70 Straight-run Gasoline 350 E. P.
McKean County Refining Co., Bradford, Pa.
68-70 Straight-run Gasoline 305-320 E. P.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa
70-72 Straight-run Gasoline 300-305 E. P.
Emery Mfg. Co., Bradford, Pa.
Lucinda Refining Co., Lucinda, Pa.
★Waverly Oil Works Co., Pittsburgh, Pa.
68-70 Blend, 425-430 E. P.
★Continental Refining Co., Oil City, Pa.

Special Naphtha

CALIFORNIA

Cleaners Naphtha
Hercules Gasoline Co., Los Angeles, Calif.
Varnish Makers Naphtha
Hercules Gasoline Co., Los Angeles, Calif.

NORTH TEXAS

V. M. & P. Naphtha
Orient Petroleum Co., Wichita Falls, Texas
Turpentine Substitute
Orient Petroleum Co., Wichita Falls, Texas
44-47 475 E. P. Naphtha
Orient Petroleum Co., Wichita Falls, Texas
47-49 445 E. P. Naphtha
Orient Petroleum Co., Wichita Falls, Texas

OKLAHOMA

V. M. & P. Naphtha
Anderson Prichard Oil Corp., Oklahoma City, Okla.
Cleaners Naphtha
Anderson Prichard Oil Corp., Oklahoma City, Okla.
Rubber Solvent
Anderson Prichard Oil Corp., Oklahoma City, Okla.
Turpentine Substitute
Anderson Prichard Oil Corp., Oklahoma City, Okla.

PENNSYLVANIA

Turpentine Substitute
★Waverly Oil Works Co., Pittsburgh, Pa.

Refineries all over the country are listed according to the products they are making today, or that they have in stock, or will make on reasonable demand.

Refineries shut down for any length of time and whose stocks of products are exhausted, are eliminated so far as possible.

It is requested, in justice to all, that all inquiries by telephone and telegraph be prepaid and this is recommended by the oil associations.

Methods of testing, approved by oil and scientific associations and the U. S. Bureau of Standards, are used. Grades of products listed, as well as names of refineries are revised each week.

Any marketers appearing in these columns are exclusive sales agents by contract with or ownership of refineries and the products listed after them are those made by those refineries

Natural Gasoline

NORTH TEXAS

Natural Gasoline—Blends
60-62 450 E. P.
Noble Oil & Gas Co., Tulsa, Okla.

CALIFORNIA

73-78 375 E. P.
Hercules Gasoline Co., Los Angeles, Calif.

OKLAHOMA

Grade A
Altitude Petroleum Co., Tulsa, Okla.
Bell Oil & Gas Co., Tulsa, Okla.
Grade B
Bell Oil & Gas Co., Tulsa, Okla.
L. O. Carter Co., Tulsa, Okla.
Grade C
Bell Oil & Gas Co., Tulsa, Okla.
Natural Gasoline—Blends
64-66 450 E. P.
L. O. Carter Co., Tulsa, Okla.

Burning Oils

ARKANSAS

42-44 Water White Kerosene
★Imperial Oil Mktg. Co., Tulsa, Okla.

CALIFORNIA

40-42 Water White Kerosene
Hercules Gasoline Co., Los Angeles, Calif.

KENTUCKY

42-44 Water White Kerosene
Great Southern Refining Co., Lexington, Ky.
Pgh. Oil & Refg. Co., Pittsburgh, Pa.
43-45 Water White Kerosene
Ashland Refining Co., Ashland, Ky.

NORTH LOUISIANA

41-43 Water White Kerosene
Caddo Central Oil & Refining Co., Shreveport, La
Louisiana Oil Refg. Corp., Shreveport, La.

NORTH TEXAS

41-43 Water White Kerosene
Sunshine Consolidated Oil Co., Wichita Falls, Tex.

OKLAHOMA

41-43 Water White Kerosene
Bell Oil & Gas Co., Tulsa, Okla.
Cameron Refg. Co., Ardmore, Okla.
Lubrite Refining Co., St. Louis, Mo.
42-44 Water White Kerosene
★Imperial Oil Mktg. Co., Tulsa, Okla.
44-46 Water White Kerosene
Altitude Petroleum Co., Tulsa, Okla.
Anderson-Prichard Oil Corp., Oklahoma City, Okla.

PENNSYLVANIA

45 Water White Kerosene
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Carnegie Refg. Co., Carnegie, Pa.
★Continental Refining Co., Oil City, Pa.
Emery Mfg. Co., Bradford, Pa.
★Empire Oil & Grease Co., Inc., Oil City, Pa.
Independent Refining Co., Oil City, Pa.
Lucinda Refining Co., Lucinda, Pa.
McKean County Refining Co., Bradford, Pa.
Mutual Refg. Co., Warren, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
46 Water White Kerosene
Emery Mfg. Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.
Mutual Refg. Co., Warren, Pa.
47 Water White Kerosene
★Empire Oil & Grease Co., Inc., Oil City, Pa.

Neutral Oils

GULF COAST

200 Vis. No. 2-2½ Color Unfilt. Pale
★Keen & Woolf Oil Co., Houston, Texas
300 Vis. No. 2-2½ Color Unfilt. Pale
★Keen & Woolf Oil Co., Houston, Texas
500 Vis. No. 3 Color Unfilt. Pale
★Keen & Woolf Oil Co., Houston, Texas
750 Vis. No. 3-3½ Color Unfilt. Pale
★Keen & Woolf Oil Co., Houston, Texas
200 Vis. No. 4½-5½ Color Unfilt. Pale
★Keen & Woolf Oil Co., Houston, Texas
300 Vis. No. 4½-5½ Color Unfilt. Pale
★Keen & Woolf Oil Co., Houston, Texas
500 Vis. No. 4½-5½ Color Unfilt. Red
★Keen & Woolf Oil Co., Houston, Texas
750 Vis. No. 4½-5½ Color Unfilt. Red
★Keen & Woolf Oil Co., Houston, Texas
1200 Vis. No. 3½-4 Color Unfilt. Pale
★Keen & Woolf Oil Co., Houston, Texas
2000 Vis. No. 3½-4½ Color Unfilt. Pale
★Keen & Woolf Oil Co., Houston, Texas
120 Vis. Black
★Keen & Woolf Oil Co., Houston, Texas
210 Vis. Transmission Lube.
★Keen & Woolf Oil Co., Houston, Texas

CALIFORNIA

100 Vis. No. 2 Color
Hercules Gasoline Co., Los Angeles, Calif.
100 Vis. No. 3 Color
Hercules Gasoline Co., Los Angeles, Calif.
200 Vis. No. 3 Color
Hercules Gasoline Co., Los Angeles, Calif.
300 Vis. No. 3 Color
Hercules Gasoline Co., Los Angeles, Calif.
450 Vis. No. 3½ Color
Hercules Gasoline Co., Los Angeles, Calif.
550 Vis. No. 3 Color
Hercules Gasoline Co., Los Angeles, Calif.
600 Vis. No. 3½ Color
Hercules Gasoline Co., Los Angeles, Calif.
100 Vis. No. 5 Color
Hercules Gasoline Co., Los Angeles, Calif.
200 Vis. No. 5 Color
Hercules Gasoline Co., Los Angeles, Calif.
300 Vis. No. 5 Color
Hercules Gasoline Co., Los Angeles, Calif.
400 Vis. No. 5 Color
Hercules Gasoline Co., Los Angeles, Calif.
500 Vis. No. 5 Color
Hercules Gasoline Co., Los Angeles, Calif.
600 Vis. No. 6 Color
Hercules Gasoline Co., Los Angeles, Calif.
700 Vis. No. 7 Color
Hercules Gasoline Co., Los Angeles, Calif.

ILLINOIS

180 Vis. No. 3-3½ Asso. Filt.
★Indian Refining Company, Lawrenceville, Ill.
180 Vis. No. 5 Asso. Filt.
★Indian Refining Company, Lawrenceville, Ill.

OHIO

90 Vis. at 100° F. No. 2 Color (Pale)
Craig Oil Co., Toledo, O.
200 Vis. at 100° F. No. 3 Color (Pale)
Craig Oil Co., Toledo, O.

OKLAHOMA

200 Vis. No. 3 Color
Bell Oil & Gas Co., Tulsa, Okla.

PENNSYLVANIA

150 Vis. No. 3 Asso. Filt.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
Seneca Oil Works, Warren, Pa.
150 Vis. No. 4½ Filt. (Red)
Crystal Oil Works, Oil City, Pa.
180 Vis. No. 3 Asso. Filt.
Carnegie Refining Co., Carnegie, Pa.
Emery Mfg. Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
Seneca Oil Works, Warren, Pa.
200 Vis. No. 3 Asso. Filt.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
★Empire Oil & Grease Co., Inc., Oil City, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
Seneca Oil Works, Warren, Pa.
34 Gravity 350-360 Flash
Pennsylvania Oil Products Refg. Co., Warren, Pa.

Cylinder Oils

PENNSYLVANIA

600 Steam Refined
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Crystal Oil Works, Oil City, Pa.
Emery Mfg. Co., Bradford, Pa.
Lucinda Refining Co., Lucinda, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
635 Steam Refined
Bradford Oil Refg. Co., Bradford, Pa.
Emery Mfg. Co., Bradford, Pa.
650 Steam Refined
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Independent Refining Co., Oil City, Pa.
McKean County Refining Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
Seneca Oil Works, Warren, Pa.
600 Flash Steam Refined
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Independent Refining Co., Oil City, Pa.
Kendall Refining Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.
★Waverly Oil Works, Pittsburgh, Pa.
620-630 Flash Steam Refined
★Waverly Oil Works, Pittsburgh, Pa.
600 Warren E
Butler County Oil Refg. Co., Bruin, Pa.
Carnegie Refining Co., Carnegie, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
600 Oil City E
Butler County Oil Refg. Co., Bruin, Pa.
Carnegie Refg. Co., Carnegie, Pa.
Independent Refining Co., Oil City, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
600 Filtered D
Butler County Oil Refg. Co., Bruin, Pa.
Cold Test Stock (bright filtered)
Carnegie Refg. Co., Carnegie, Pa.
Kendall Refining Co., Bradford, Pa.
Mutual Refg. Co. Warren, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa
Warr-Penn Refining Co., Warren, Pa.
Cold Test Stock (dark filtered)
Carnegie Refg. Co., Carnegie, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.
Warr-Penn Refining Co., Warren, Pa.
Black Oil
Emery Mfg. Co., Bradford, Pa.
Wax Oil
Lucinda Refining Co., Lucinda, Pa.

Motor Oils

ILLINOIS

Indian Refining Company, Lawrenceville, Ill.

OHIO

Craig Oil Co., Toledo, O.

PENNSYLVANIA—100% PURE

Butler County Oil Refg. Co., Bruin, Pa.
Carnegie Refg. Co., Carnegie, Pa.
★Continental Refining Co., Oil City, Pa.
Emery Mfg. Co., Bradford, Pa.
★Empire Oil & Grease Co., Inc., Oil City, Pa.
Seneca Oil Works, Warren, Pa.
★Waverly Oil Works Co., Pittsburgh, Pa.

Greases and Soap

Auto Soap
Damascus Mfg. Corp., Cleveland, O.
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
Stevens Grease & Oil Co., Cleveland, O.
Axle Grease
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
Chatterless Oil Base
Damascus Mfg. Corp., Cleveland, O.
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
★Waverly Oil Works Co., Pittsburgh, Pa.
Cup Grease
★Columbia Oil Co., 3419 Papin St., St. Louis Mo.
Richardson Lubricating Co., Quincy, Ill.
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
Yuba Oil Refining Co., Nacogdoches, Texas
Cutting Compounds
Damascus Mfg. Co., Cleveland, O.
Stevens Grease & Oil Co., Cleveland, O.
Gear Grease
Yuba Oil Refining Co., Nacogdoches, Texas
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
Mill Grease
Stevens Grease & Oil Co., Cleveland, O.
Jack-Post Grease
Stevens Grease & Oil Co., Cleveland, O.
Pressure Gun Grease
★Columbia Oil Co., 3419 Papin St., St. Louis, Mo.
Fiske Bros. Ref. Co., 24 State St., New York, N. Y.
Branch 215 Pontiac St., Toledo, Ohio
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
Stevens Grease & Oil Co., Cleveland, O.
Soluble Oils & Base
Damascus Mfg. Corp., Cleveland, O.
Stevens Grease & Oil Co., Cleveland, O.
Sponge Grease
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
Transmission & Differential Grease
Capstone Mfg. Co., Plum Pt. Lane, Newark, N. J.
★Columbia Oil Co., 3419 Papin St., St. Louis, Mo.
Damascus Mfg. Corp., Cleveland, O.
Fiske Bros. Ref. Co., 24 State St., New York, N.Y
Branch 215 Pontiac St., Toledo, O.
Stevens Grease & Oil Co., Cleveland, O.
Universal Joint Grease
Stevens Grease & Oil Co., Cleveland' O.

Wax Distillate

PENNSYLVANIA

34-34½ Gravity
Bradford Oil Refg. Co., Bradford, Pa.

Wax

ILLINOIS

124-126 White Crude Scale
★Indian Refining Company, Lawrenceville, Ill.

OKLAHOMA

124-126 White Crude Scale
Bell Oil & Gas Co., Tulsa, Okla.

PENNSYLVANIA

122-124 White Crude Scale
Butler County Oil Refg. Co., Bruin, Pa
Emery Mfg. Co., Bradford, Pa.
Independent Refining Co., Oil City, Pa.
Kendall Refining Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren
124-126 Crude Scale (off white)
Crystal Oil Works, Oil City, Pa.
128-130 Refined
★Waverly Oil Works Co., Pittsburgh, Pa.

Fuel Oil

ARKANSAS

20-24 Fuel Oil
★Imperial Oil Mktg. Co., Tulsa, Okla.
32-36 Gas Oil
★Imperial Oil Mktg. Co., Tulsa, Okla.

CALIFORNIA

14-18 Fuel Oil
Hercules Gasoline Co., Los Angeles, Cali
14-18 Bunker Oil
Hercules Gasoline Co., Los Angeles, Calif.
27 + Diesel Oil
Hercules Gasoline Co., Los Angeles, Calif.
20-24 Fuel Oil
Hercules Gasoline Co., Los Angeles, Calif.

KENTUCKY

24-26 Fuel Oil
Great Southern Refining Co., Lexington, Ky.
Nashville Oil Co., Nashville, Tenn.
26-30 Fuel Oil
Nashville Oil Co., Nashville, Tenn.
30-32 Fuel Oil
Ashland Refining Co., Ashland, Ky.
34-38 Gas Oil (light)
Great Southern Refining Co., Lexington, Ky.
34-38 Gas Oil (dark)
Great Southern Refining Co., Lexington, Ky.
38-40 Distillate (light)
Ashland Refining Co., Ashland, Ky.

NORTH LOUISIANA

14-18 Fuel Oil
Caddo Central Oil & Refining Co., Shreveport, La.
18-22 Fuel Oil
Louisiana Oil Refg. Corp., Shreveport, La.
32-36 Gas Oil
Caddo Central Oil & Refining Co., Shreveport, La.
Louisiana Oil Refg. Corp., Shreveport, La.

NORTH TEXAS

24-26 Fuel Oil
Sunshine Consolidated Oil Co., Wichita Falls
34-38 Gas Oil (dark)
Texhoma Oil & Refg. Co., Wichita Falls, Tex.
38-40 Distillate—Prime White
Noble Oil & Gas Co., Tulsa, Okla.

OKLAHOMA

22-24 Fuel Oil
L. O. Carter Co., Tulsa, Okla.
24-26 Zero Oil
Altitude Petroleum Co., Tulsa, Okla.
26-30 Fuel Oil
Bolene Refining Co., Enid, Okla.
30-32 Fuel Oil
Bolene Refining Co., Enid, Okla.
32-36 Gas Oil
Bolene Refining Co., Enid, Okla.
Cameron Refg. Co., Ardmore, Okla.
L. O. Carter Co., Tulsa, Okla.
★Imperial Oil Mktg. Co., Tulsa, Okla.
★Roxana Petroleum Corp., St. Louis, Mo.
36-38 Straw Distillate
Cameron Refg. Co., Ardmore, Okla.
38-40 Straw Distillate
Bolene Refining Co., Enid, Okla.

PENNSYLVANIA

30-34 Fuel Oil
Butler County Oil Refg. Co., Bruin, Pa.
Mutual Refg. Co., Warren, Pa.
36-40 Fuel Oil
Bradford Oil Refg. Co., Bradford, Pa.
Carnegie Refg. Co., Carnegie, Pa.
Emery Mfg. Co., Bradford, Pa.
Independent Refining Co., Oil City, Pa.
Lucinda Refining Co., Lucinda, Pa.
McKean County Refining Co., Bradford, Pa.
Pennsylvania Oil Products Refg. Co., Warren, Pa.

Road Oil

OKLAHOMA

Altitude Petroleum Co., Tulsa, Okla.

Petroleum Coke

Imperial Oil Mktg. Co., Tulsa, Okla.
Kendall Oil Refining Co., Bradford, Pa.
Shreveport Prod. & Refg. Co., Shreveport, La

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Improved Methods of Accounting Aid Management

By Henry W. Ralph
Industrial Accountant, Indian Refining Co., Inc.

Article II

HAVING developed a method of designation which lent itself to satisfactory summarization of accounts for the purpose of stock control, the next step was the development of prices which could be used for the purpose of transfer to and from the various organization subdivisions.

As long as the refinery consumption of crude oil was priced at an average which was dependent on the organization stocks and the previous policy of accumulation of a crude reserve, the determination of whether or not the refinery was a profitable proposition currently was dependent entirely on theoretical consideration, and any theory which might be used in establishing a criterion was open to serious criticism.

Priced at Day's Market

The successful carrying on of the actual refining does not necessarily bear any relation to previous purchasing policy and can with advantage be separated therefrom. It was therefore considered worthwhile to price the consumption of crude by the refinery at the day's market price for crude. The monthly consumption, therefore, with each day's consumption priced at the day's market, combined with the refinery expenses, gave a total cost of the products produced by the refinery during the month. With the production priced at a value consistent with the market value of such products each month, the difference developed thereby shows very clearly whether the refinery is making a profit or a loss.

By the assumption of a definite policy for pricing crude oil supply in storage, which would essentially be based on prices actually paid for crude, and making a comparison with the current value as determined for each day's consumption, there was established a profit or loss which was an accurate reflection of the wisdom or lack of same of the organization purchasing policy, the crude oil trading account profit and loss statement.

If the refinery each month is credited for its production or yield on the basis of current market value, there is developed by reason of the fact that the sales department is charged on the day of shipment with the current value of product shipped, an amount of profit or loss which is significant from the standpoint of knowing whether or not the treatment of the refinery as a place of storage for accumulating reserve of products has been successfully handled.

The actual determination from day to day of the proper operation of the refinery should be controlled by a current review of the relative value of products that might be made by varying the manufacturing process with due allowance for marketing channels of possible products so that at any time the margin between the cost of raw material, supplies, and manufacturing expenses, and the aggregate value of the products produced might be as large as possible.

With calculations made currently which enable the refinery to operate in the manner which will, according to the best information, be the most profitable from day to day, the method described above of developing a refinery profit and loss should develop facts not widely different from what may be prophesied at the time that policy of manufacturing is actually decided upon.

Sales Organization P. & L.

In an attempt to develop significant P. & L. figures for the scheme of distribution, the basic assumption is made that the sales organization is responsible for marketing the production of the refinery, to which it acquires title on an agreed basis. In this marketing effort it will use to the extent to which it can profitably do so the distributing organization it has in the shape of bulk stations and the attendant filling stations.

But little thought is required to demonstrate that an analysis of the results of such sales operations should be made in the first instance on the basis of territorial subdivisions rather than by individual products. The cost of selling and other expenses do not lend themselves satisfactorily to distribution to separate products, and even on the basis of territorial division, the problem of a satisfactory accounting for stock of products at all points is not possible except by the development of the classification which was described in the preceding article. (See page 61, N. P. N., Aug. 5, 1925.)

The method of pricing shipments made to or for certain subdivisions of the sales department thus becomes a separate problem. In the solution of this it is important that an attempt be made to use lines of procedure which will develop the most significant figures, regardless of whether the same basis is used for each group.

For most concerns it will be best to adopt for refinery straight run products a market valuation, i. e., price on the day of shipment at which similar products are being marketed. For compounding stocks which have been purchased elsewhere it will be best to use a price dependent on the cost of acquisition, provided same was not seriously out of line with the market. For compounded stocks it seems easiest and the results will be significant enough if the price is based on a theoretical formula rather than actual consumption of compounding stocks during a month. (There should be a check made between formula and actual consumption to compare the two, and correct wide variations.)

Price Formula Sheet

On the broad outlines established above it was necessary to devise a price formula sheet. The effect of this sheet was to establish for every day a price for valuing each shipment as made.

With such a price for each product it became a simple matter to determine for any of these products on any day whether it is being sold to advantage or not. The formula price, plus packaging and handling cost, plus freight can be readily compared with the selling price and it becomes a matter of knowing whether the margin thus developed is sufficient to cover the selling expenses.

The method of handling packages is one which is standard in other industries. Prices are established consistent with the

Accounting Is Factor Which May Make or Break an Oil Company

ACCOUNTING often is a factor which may make or break an oil company. When an accounting system is good the directors and officials of a company may know at any time the exact condition of the company and what course they should pursue in the future. If the system is poor the officials are left to grope in the dark and the chances are even that they will not make all that is possible out of their company's operations.

Mr. Ralph has developed a system which is working well for one of the large oil companies. Its chief points are these:

"Establishing an inventory value based on current markets rather than any fixed inventory basis.

"Separating refining or manufacturing operating accounts from marketing or distributing accounts so that each division of the industry can be studied in detail as to its profitable or losing operation.

"Establishing distribution costs on a geographical basis so that individual stations can be checked to determine whether they are being operated at a profit or loss.

"Setting up a separate accounting division for trading so that the correctness of the company's policy of purchasing crude in advance and storing it, and policy of storing refined products against future demand can be determined at any time."

This is the second of five articles. The first appeared in National Petroleum News for Aug. 5. The remaining three will appear in early issues.

5 vital features the OTTAWA excels in—

RIGIDITY

Interior parts protected within heavy one piece tubular steel housing. No loss of gasoline from leaky joints.

SIMPLICITY

Fewer parts and less number of pipe joints assure greater service and satisfaction — quicker, more efficient action.

ACCESSIBILITY

Easily removed operating door and auxiliary door give quick access to every working part. Make installation quicker and easier.

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Dependable, fool-proof operation every filling station must have. Hand or air operation easy and rapid.

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The glass cylinder is washed every time it refills with gasoline—makes cleaning seldom necessary. Easy and safe access to inside of glass.

A Pump Built to Serve You and Your Customers Better!

The OTTAWA Visible Gasoline Pump is an outstanding leader in the oil world today. Its staunch and strong better-service features have won it fame everywhere. A multitude of oil merchants have tried, tested and acclaimed the OTTAWA a real gallonage gainer.

Masterful engineering made the OTTAWA a sturdier built pump of fewer operating parts—a pump for longer, trouble-free service. Eliminates all your "leak back" troubles and other worries common to old style pumps.

The OTTAWA is the industry's great achievement. Quick, economical, fool-proof action that speeds up the work of your operators. Accurate, visible measure that pleases the public. It is indeed a pump to better serve you and your customers. The price is reasonable. Investigate!

OTTAWA VISIBLE PUMPS

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I want to increase my gallonage sales through better service so send me your low price on OTTAWA pumps—also your Equipment Book.

Name _____

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Mail the Coupon—Now!

Get our astonishing low pump price and new big Station Equipment Book that's free for the asking. Write today!

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Water-tight Fill Pipe Cap

An "easy locking" water-tight fill cap. High quality grey iron, brass screw cover. Padlocks securely in any position. 4 sizes.

Reducing Bushing

For reducing 3½ in. threaded pipe openings to suction pipe size. Made of high quality grey iron accurately threaded. 5 sizes.

Vented Fill Pipe Cap

Properly vented with lugs on inside for strainer. Hinged cover can be locked in place. Made of high grade cast iron. 4 sizes.

Air Vents for Underground Tanks

A duplex screened air vent, made of high quality grey iron. Made in pipe sizes from inch to 2 inch.

OIL jobbers, refiners, tank manufacturers are all finding that Des Moines Tank Fittings meet their requirements in these three important points— 1. The line is right for sizes and quality — 2. The price is right— 3. And the delivery service quick. Our large made up stock enables us to ship orders out within twenty-four hours. Get prices on your requirements.

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DES MOINES, U. S. A.

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Field Storage	10,000 gals. 12,000 " 20,000 "	in stock	Refineries Complete

Immense Stocks ***Immediate shipment***

We have been in the business since 1871 and fully understand your requirements. Wire, write or phone your inquiries.

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Reading 400# WSP Steel Globe Valve

Reading steel gate valves look simple. They *are* simple. Yet each valve embodies 15 special features worthy of your consideration as a valve user. Write for illustrated booklet.

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READING *for steel*
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market value, both for filled and empty packages. The empty package differential represents a close approximation of the value of the package delivered at the refinery, at which point practically all the filling is done. The filled differential represents this empty value plus an allowance for the cost of filling the package. This allowance is fixed by consideration of the ordinary cost of filling packages. It is subject to revision in accordance with facts developed in the accounting. If at any time package values change, a new sheet of package differentials is prepared, which automatically makes such change effective for all points at which packages are in stock.

With a mechanism which established formula prices simply and without bias, the first step necessary to ascertain whether a particular subdivision of the sales organization was operating satisfactorily was to combine the opening inventory with monthly shipments from the refinery and any purchases from outsiders to develop an average price. This price is used for determining the cost of goods sold and for pricing the inventory at close of period.

The difference between the price realized from sales and the combination of cost of goods sold and selling expenses gives a resultant profit or loss figure which is significant in this relation.

Other P. & L. Items

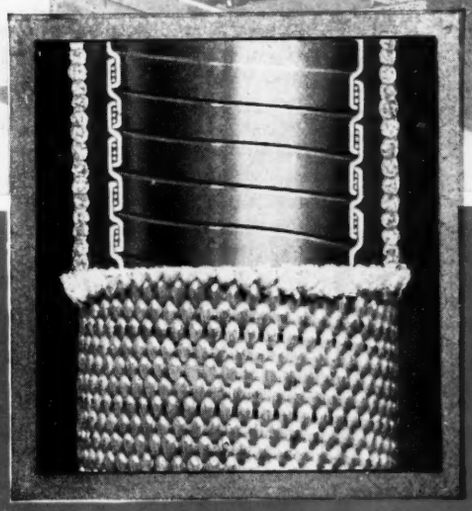
With a definite segregation made of the results of manufacturing so that the refinery profit and loss figure is significant of the worth of a manufacturing plant, and the profit and loss figure of a sales organization, either by subdivisions or in total, is a measure of the efficiency of a distributing organization, it becomes evident that any other gain or loss resulting from operations is due primarily to the results of trading activities of an organization.

An examination of the other elements entering into profit and loss for a month will ordinarily demonstrate that aside from miscellaneous items which are classed as other income credits or other income debits, the profits or losses developing may be said to be due to the market policy of the organization.

As already indicated, the difference between the value of raw material consumed, priced at the day's market, and the average organization cost of such goods is due entirely to relation of current markets to previous purchases. By developing such an organization cost and comparing same with a charge for crude consumed on the basis of the current market, there develops an organization crude oil trading account profit and loss figure each month.

By crediting the refinery for its monthly production at market prices and charging sales subdivisions on the date of shipment at the same current market prices there will be developed a difference which will reflect the effect of the market trend on the stocks of products on hand at the plant. The profit or loss thus developed is merely incidental to the maintenance of a stock at the refinery sufficient to meet all ordinary demands for the goods, but even though essential to the proper con-

TRIPLEXD
TANK CAR HOSE



LOWEST COST PER GALLON CARRIED

TRIPLEXD is a great husky giant, built to do all the heavy work and stand all the hard knocks that fall to the lot of a tank wagon hose. It is not a mere pump hose with a large inside diameter. Everything about Triplexd is bigger and stronger and heavier—tubing, rubber, fabric, couplings, swivels, and all. These make it cost less per gallon carried than does any other hose, and give it the longer life that will eventually earn its place on every tank wagon you operate.

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COLORADO
DENVER: Eaton Metal Products Co., 4800 York Street

FLORIDA
JACKSONVILLE: Dixie Culvert & Metal Co., Talleyrand & Jessie Sts.

GEORGIA
ATLANTA: Dixie Culvert & Metal Co.

ILLINOIS
CHICAGO: Amco Sales Corporation, 644 W. Washington Blvd.

PENNSYLVANIA
PITTSBURGH: Rutledge Equipment Co., 1741 Oliver Building

OHIO
CLEVELAND: The Consumers Rubber Co., 1302 Ontario Street, N.

MISSOURI
KANSAS CITY: Butler Manufacturing Co., 1324 Grand Avenue
ST LOUIS: Metal Hose & Tubing Co., Inc., 1621 Pine Street

MINNESOTA
MINNEAPOLIS: Butler Manufacturing Co., 900 Sixth Ave., S. E.

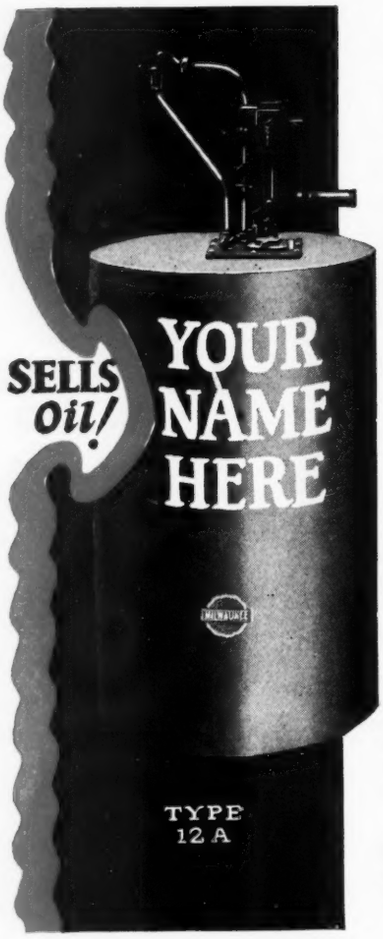
NEW YORK
BROOKLYN: Metal Hose & Tubing Co., Inc., 236 Tillary Street

TEXAS
HOUSTON: Peden Iron & Steel Co., 700 N. San Jacinto Street
SAN ANTONIO: Peden Iron & Steel Co., 1401 South Flores Street

VIRGINIA
RICHMOND: Richmond Engineering Co., Brook Ave. at S. A. L. Ry.

CANADA
TORONTO, ONT.: Dunlop Tire and Rubber Goods Co., Limited

ENGLAND
LONDON: J. Bazley-White, Jr., 3 Love Lane, Eastcheap, E. C. 3



Move More Oil!

BETTER-LOOKING "lube" outfits sell more oil, just as attractive boxes sell more candy.

House your oil business in Milwaukee outfits and you get the triple value of sales appeal, dependable service and long life.

These outfits cost less because they are built for at least 10 years of service—with brass cylinders and ground valves, and rugged pumps set in extra-sturdy tanks.

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"LUBE" OIL OUTFITS

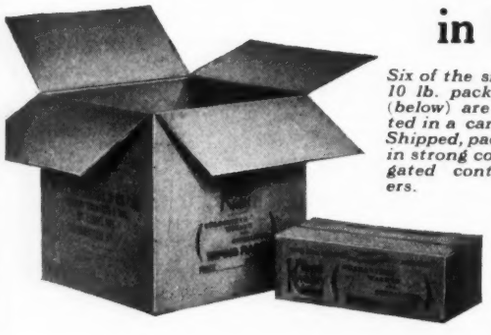
Built in two styles —type 12A, round, and 14A, oblong. Can be painted in your colors and stenciled with your name.

Write today for Bulletins and prices.

Type 14A

Milwaukee Tank Works
Milwaukee, Wis.

NOW, Sterilized Wipers in 10 lb. Packages



Six of the small 10 lb. packages (below) are fitted in a carton. Shipped, packed in strong corrugated containers.

Even if you use wiping cloths in less than bale quantities, you can now get guaranteed sanitary, lintless Kleen Kwality Kloths. These nation known wipers are packed in 10-lb. packages, thus bringing to small users the same protection accorded large plants and factories. If your jobber cannot supply you with the small packages or cartons (6 pkges.), write direct.

Sanitary—Lintless

Wiping rags go through a strenuous treatment before they win the name, Kleen Kwality Kloths. They are washed in chemicals, live-steam boiled and baked at 225° F. When you get them they are as sterile as hospital gauze.

Used Everywhere

Employers who know the value of cutting down infection in small cuts and bruises use Kleen Kwality Kloths More than $11,000,000 was paid out last year as a result of such infections. Protect your workers with sanitary cloths. They cost no more.

AARON FERER AND SONS, St. Louis, Mo.
Branches in the main industrial centers of the U. S. A.

Kleen Kwality Kloths

tinuance of business, it is not an element necessarily related to the volume of manufacturing nor to the volume of sales, but it is in reality a profit or loss which develops directly from and is dependent upon the organization policy of storing surplus stocks or cutting them down to the minimum.

By following the procedure outlined above, there is developed each month an analysis of the P. & L. into three major subdivisions, Manufacturing, Selling, and Trading. Trading is broken down into its two components, crude oil and finished products, and the selling P. & L. into as many subdivisions as there are actual units in the same.

Operating Reports

As an aid in controlling the organization policy and a measuring post at any time of results which may be expected from policy which has been in effect and has not yet been crystallized into profit and loss, it is necessary that the executives keep in close touch with market developments from day to day, and at such times as this information is desired, the trend of market prices for the important commodities and the trend of prices which develop in the organization must be available.

This means that for each month for crude oil a price chart should be maintained covering the usual sources of supply and the prices developed by the organization for their monthly purchases, their consumption and opening and closing inventories; that for gasoline and other products that charts will be prepared to show the spread being enjoyed and how it will be affected by varying factors—as the spread between tank car and tank wagon prices, the influence of opening inventory on "Cost of Goods Sold" and the change of market prices during the period; and similar data for other products.

Possible to Make Changes

With a knowledge then of significant profit and loss figures it should be possible to make changes which will enable the various functions of the organization to be discharged in a way which under normal market conditions will be better than a "break even" basis. Certainly for the selling organization it will be possible to decide which units are profitable and which are unprofitable.

By correcting conditions at those stations where there is a loss and applying similar corrective measures to other stations, it should be possible to have a sales organization which under normal conditions will function efficiently and profitably, and fail to show profits only at those times when falling markets produce an inventory shrinkage more than sufficient to offset the ordinary spread.

In no industry will all the units survive when competitive conditions are too rigorous. The weakest organizations will fail. The ones remaining will eventually find themselves in a position where the margin of profit can be broadened. Under those conditions it usually broadens very materially until dormant plants are again revived or new capital enters into the field.

The change in competitive conditions is continuous, not only in the industry as a

whole but as affecting particular localities. Whereas at one time a particular portion of a distributing system may have been wisely placed developments since that time may have been such that it is manifestly not wise to continue to operate such a station.

A distributing unit should be logically placed, i. e., in a territory where, in view of source of raw materials and freight structure, it can be profitably serviced, meeting competition from refineries located elsewhere with not too much of a disadvantage. If distributing facilities exist which in their present form cannot be profitably operated, steps should be taken to alter the scheme of distribution, either building up the unit which does exist on some basis to a form which will permit of profitable operation, or developing the present unit to a point where it is attractive to another organization which can make profitable use of it.

The ultimate aim of the various changes is to permit the fullest intelligent co-operation by the various sections of an organization. Reports developed of manufacturing activities and reports of selling activities were designed primarily to build up information which would be helpful to those responsible for operation. The full responsibility of managers for their units was accentuated.

Other Accounting Changes

Various incidental economies become possible by reason of this theory, one outstanding case being the elimination of duplication in keeping customers' ledgers, whereas previous theory had been that with a centralized organization the ledger could be more cheaply kept in a satisfactory manner at the central office. The fact of operating requirements was lost sight of, for a field office cannot handle its selling operations satisfactorily if data concerning its possible customers is maintained a good many miles away and in point of time at least several days. As a matter of fact, the inter-office correspondence necessary under the original condition practically disappeared when the customers' ledgers and the work incidental thereto became decentralized.

All of the above again brings one back to the fact that information needed to operate a business should be developed in its most usable form and in the simplest manner at as early a stage as possible. If it is then forwarded to other controlling offices, it should be forwarded in only as much detail as is necessary to give effective control at such offices.

With a fixed investment in plant, it is clear that failure to utilize such facilities is needlessly imposing a burden which must be carried by another portion of the organization. Failure to utilize all manufacturing facilities results in an increased manufacturing cost. It becomes a question whether such loss should be accepted; or whether an increased volume of manufacture, resulting in a reduced cost and an increased volume of products to be marketed would not ultimately produce less of a loss than the failure to use the manufacturing facilities to capacity. The value of distribution channels will of course vary from one time to another and they are not quickly interchangeable. There is, however,

The Perfect Tank

A size for every demand. Low center of Gravity and neat in appearance.

Write for prices and descriptive literature

The Owosso Boiler & Welding Co. **Owosso, Michigan**

They Know Their Oil!

By virtue of educational advertising, or perhaps by bitter experience with poor oil—the average motorist is careful to see that he gets the grade of oil that really LUBRICATES. The motorist may not know how to interpret an analysis of oil—but he does know how the oil acts as a lubricant, and he knows how long Empire oil does a clean job of lubricating. It looks almost too good to discard when the crank-case is drained.

If you sell EMPIRE OILS you are giving your customer the best there is in oil. There is no chance of complaint because EMPIRE oils test best, and oil customers are bound to be satisfied.

Quick service, uniform quality. We will ship in bulk from our large stock of Pure Pennsylvania Oils for your own compounding, or we meet your specifications EXACTLY if we do the compounding. Any sized order, from a can to a carload.

Buy Empire and buy safe—!

Guaranteed 100% PURE PENNSYLVANIA OIL

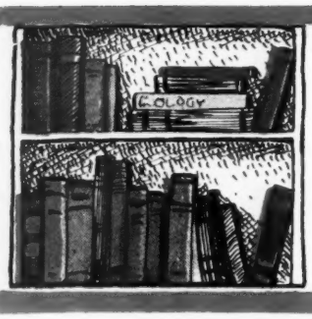
EMPIRE

When You Buy Empire You Buy The Best

EMPIRE OIL & GREASE COMPANY

Oil City, Pa. Refinery, Reno, Pa.

Warehouses at Strategic Shipping Points!



Oil Man's Bookshelf

"THE man who does not devote a part of his spare time to study, will continue to turn the grindstone while the other fellow sharpens his ax."

The OIL MAN'S BOOKSHELF will help you select books you can read and study with the greatest profit, whether you are in the refining, producing, natural gasoline or marketing divisions of the industry.

Below are some books that have been highly recommended by oil men.

THORNTON'S LAW *of* OIL and GAS

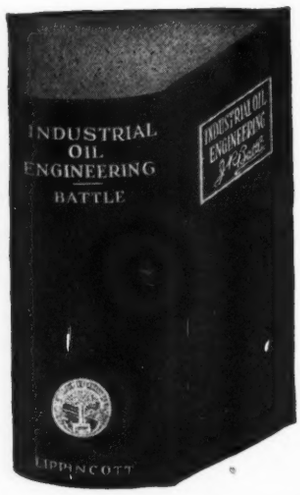
The fourth edition of Thornton's Law of Oil and Gas, just out, gives the latest compilation of all statutes and court decisions pertaining to oil and natural gas.

All problems of transportation of oil and gas, explosions, leases, drilling contracts, insurance, taxes and personal injury cases are discussed thoroly and cases cited.

This law work is written by an authority—W. W. Thornton, late Judge of the Superior Court of Marion County, Ind.

Every oil company in the country should protect itself with a copy of Thornton's Law of Oil & Gas.

Two volumes, 3,000 pages—$20. Send for your copy today.



Industrial Oil Engineering by J. R. Battle, contains 1,100 pages of tables, charts, requirements and other information on lubrication and industrial oils.

Tells you the most efficient utilization of oil products and equipment; the saving of power and elimination of oil waste.

Industrial Oil Engineering is the most complete work ever written on lubrication—Price $10.

ROMANCE OF GASOLINE

This is the complete story of *"Gasoline"* told in popular language, and written by an authority on the subject of its use in motor cars—T. A. Boyd, head of fuel oil section, General Motors Research Corp.

What gasoline is, where it comes from, its properties, what distinguishes good gasoline from bad, how the motorist can get more miles out of a gallon, and help in the economy of this important fuel—all these facts are given in chatty, non-technical style and profusely illustrated.

***"Gasoline"* is a message to the public that has so often been recommended to the oil industry. Every man engaged in the making and distributing of motor fuel should read it.**

206 pages—popularly priced at $2.50.

Cut and Mail

National Petroleum News,
809 Caxton Bldg., Cleveland Ohio.
I want the books checked below. Enclosed is check or money order for $_____

- ☐ GASOLINE by R. A. Boyd.
- ☐ MOTOR FUELS by E. H. Leslie.
- ☐ PRACTICE OF LUBRICATION by T. C. Thomsen.

NAME _____

Address _____

_____

_____

a certain flexibility which can be utilized in seeking the most profitable outlet.

As indicated elsewhere, the executives governing the company policy must be able to determine in advance what results may be expected from certain policies in regard to manufacturing and selling and certain definite compilations of data are prepared for them with this in mind.

Overhead

The treatment of the allocation of administrative and General Office expenses must also receive serious consideration. An overhead charge based on the gallonage sold gave rise to the very serious objection that the greater the volume of business transacted by a particular unit, the larger proportion would it carry of the overhead.

In the operation of stations, the management of one company was desirous of emphasizing the importance of not investing any money in equipment or plants which would not earn profits currently; also in the reduction of inventories to the lowest point consistent with proper distribution and the maintenance of the accounts receivable at as small a figure as is consistent with good business. Computation is therefore made monthly and each station is charged an interest figure which is developed by calculating interest at a per cent per annum on the total of the investment in plant, in current monthly inventory, and current total in accounts receivable.

The relationship of the interest charged to stations and general office overhead is of course, entirely a matter of circumstance, and will vary with the individual company.

Comment

The ultimate object of the changes described above was to provide better operating information. In doing this the main features have been:

Comprehensive classification of products.

Basis price for each classification and price differential for products.

Price formula procedure.

New method of finding "cost of goods sold."

Subdivision of organization P. & L. into manufacturing, selling and trading.

Emphasis on territorial subdivision of selling P. & L. statements.

It is pleasant to record that these changes which have already produced marked betterments, were made in the particular case in point by the permanent staff of the company; were practically put into effect in the course of six or eight months, and that the cost of making the change and producing the facts in the new manner was less than the cost of doing the work by the previous method.

A striking benefit of the review of the office procedure, which was an important adjunct of the changes in accounting, has been the elimination of reports which were faulty because of false premises or inaccurate reasoning; and the substitution for them of reports which are more sound and less expensive to prepare.

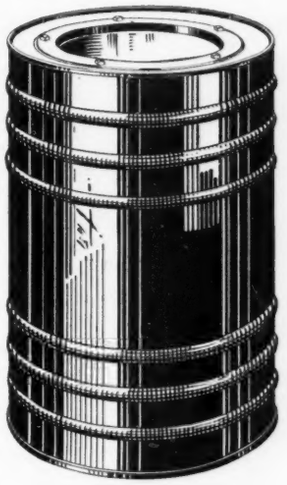
(*To be continued in an early issue*)

Have You Compared Quotations

BENETCO
No. 11

Container for 100 pounds of grease. Openings at top any size you desire. Made of steel throughout.

Fastened to truck by two bands.



We Also Manufacture Steel Barrels of All Kinds.

on your greasing equipment when you buy it complete and when you buy the container direct from a barrel manufacturer and the pump from a pump manufacturer?

You will find it a decided economy to buy the container direct.

Let us quote you and prove that you will get a better container for less money.

Wilson & Bennett Mfg. Co.
6530 S. Menard Ave., Chicago, Ill.
Sales Representatives In All Principal Cities

BENETCO Steel Containers

TRAHERN Gasoline and Oil Pumps

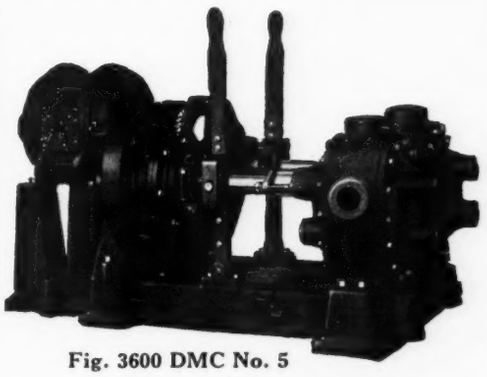


Fig. 3600 DMC No. 5

For the Bulk Station

THE Trahern Bulk Station Pump illustrated, is the standard double unit equipped with two 100 G. P. M. Pumps. It is arranged with friction clutches, power, and pumps mounted on one common bed plate, compact and sturdily designed. This unit can be arranged for either belt, motor or engine drive according to each stations requirements; also with or without space for fire wall.

Other Trahern outfits have from 1 to 6 pumps mounted together and compactly arranged, each pump operating independently on the same or different liquids as desired. Catalog will be sent on request.

GEO. D. ROPER CORP.

ROCKFORD, TRAHERN ILLINOIS.

TRAHERN PUMPS FOR PERMANENCE

HERE AND THERE

LEO STEINSCHNEIDER, chief engineer and director of the Bruenn-Koenigsfelder Engineering Works, Koenigsfeld, near Bruenn, Czecho-Slovakia, was expected to arrive in New York the first of August, where he will remain for three weeks at the Hotel Commodore.

Mr. Steinschneider is well known in Europe as the originator of a high vacuum process for the production of high-grade lubricating oils, which his company has been marketing for some years, according to J. T. Smith, editor and managing director of "Petroleum World" and "Oil News," London. Several large American refiners have recently been investigating the process, and during Mr. Steinschneider's visit he will furnish data on the economies of this process with which European refining chemists have long been familiar. The process is in use throughout Europe and the Far East, according to Mr. Smith.

* * *

Hot weather no longer holds terrors for F. C. Wright, president of the Paramount Oil Co., Fort Dodge, Ia., and H. G. Kortright, vice president and sales manager, as several Paramount stations have been built around Lake Okoboje and Spirit Lake, Ia. This makes it possible for Messrs. Wright and Kortright to work in an inspection trip whenever the mercury gets too high in the home office town.

* * *

George Solle, proprietor of the George Solle Oil Co., Springfield, Ill., is enjoying a month's vacation with his family at their summer home at Baldwin Beach, Ill., according to R. G. Hanson, manager.

* * *

J. M. Cushman, of the International Oil Co., Des Moines, Ia., is on an extended trip to his native state, Massachusetts. While he is in the East, he will visit a number of points of interest.

* * *

William Henriksen, president of The Russian Oil Co., Chicago, Ill., is commuting during the week ends and his vacation period between Chicago and his summer home at Fox Lake, Ill.

* * *

W. S. Jenkins, of the Jenkins Petroleum Process Co., Chicago, is spending several days at Eldorado, Kan., with the Skelly Oil Co.

* * *

G. A. Johnson, proprietor of the Sac City Oil Co., Sac City, Ia., will move into his attractive new residence here on Sept. 1.

Gustav A. Bergfors, Braintree, Mass., who has had 14 years' experience in the oil business, and who was formerly assistant New England manager for the Tide Water Oil Sales Corp., and until his resignation, president of Northeastern Oil Co., Boston, has started in the oil business for himself.

He is doing a wholesale marketing business in oils under the name of the Northlite Oil Co., at Braintree. A new plant and office building on the main highway has just been opened. Two filling stations have also been built, one in Quincy and one in Braintree.

* * *

Clarence E. Bennett, president of the Niagra Petroleum Co., Westfield, Ill., is leaving on Sept. 1 for Sunshine City, Fla., where he will remain for some months. Charles Brock-Jones, vice president, will be in charge of the business during Mr. Bennett's absence.

* * *

Frank Pye, salesman formerly at Galesburg, Ill., for the Roxana Petroleum Corp., St. Louis, Mo., has been transferred to Moline, Ill. H. T. Goff, who was formerly with the National Refining Co., succeeded him as salesman for the Roxana at Galesburg.

Junior Here and There

William Howard, Jr., general lubricating oil salesman for the Gulf Refining Co. in Bridgeport, Conn. territory, is the father of a baby girl born recently.

* * *

The arrival of an eight-pound baby boy on July 4 was an additional cause of celebration at the home of John R Kiefer, president of John B. Kiefer & Sons Co., oil marketers at New Castle, Pa.

* * *

"Another booster for Sinclair oils" is the way Wesley Fulton, of the Fulton Oil Co., Fremont, Ind., distributor of Sinclair products, describes the birth of a daughter, Mary Eileen, on July 1.

* * *

A five and a half pound boy arrived at the home of Mr. and Mrs. Leo Didion on June 22. Mr. Didion is agent at Bellevue, O. for the Paragon Refining Co.

* * *

A daughter was born on July 27 to Mr. and Mrs. Charles E. Stoll, Louisville, Ky. Mr. Stoll is secretary of the Stoll Oil Refining Co. at Louisville.

C. M. Stoddart, who has been for many years in the refining and marketing branches of the oil industry in the Warren, Pa. district, has formed his own organization for marketing a complete line of petroleum products.

Mr. Stoddart was lately with the Viking Oil Co., Warren, until the formation of his own company. He has previously been with the Clarendon Refining Co. and with the White Oil Corp.

B. K. Stevens, oil producer of Warren, is associated with Mr. Stoddart in his venture.

* * *

C. W. Trammell, president Trammell Oil Co., Chickasha, Okla., has just returned from California where he spent a month's vacation.

C. W. Bailey, secretary and treasurer of the company, has left for Denver for a month's vacation.

* * *

C. M. Kinney, secretary of the Oklahoma Oil Jobbers Association, Oklahoma City, Okla., started on his vacation the week of July 20. He is motoring with his family through several of the central western states.

* * *

W. F. Gates, president of the Prairie Pipe Line Co., Independent, Kan., George Coyle, J. J. Linehan and M. J. Loftis, other officials of the company, recently made a tour of Butler and Greenwood counties in Kansas.

* * *

F. A. Young, secretary and treasurer of the Broadway Oil Co., Muskegon Heights, Mich., has just secured an increase of $15,000 in stock through the Michigan Securities Commission, making total capitalization $30,000.

* * *

Clyde D. Moore, who has been with the Pure Oil Co., Columbus, O., for the past two years as secretary to E. M. Tharp, director of publicity, has joined the editorial staff of the Ohio State Journal, Columbus, O.

* * *

E. H. Bensen, district superintendent at Danville, Ill. for the Sinclair Refining Co., has recently been transferred to the division office at Atlanta, Ga., according to W. F. McClure, agent at Danville.

* * *

L. F. Kuehnle, president of the Iowa Independent Oil Men's Association, Des Moines, Ia., left on July 19 for Pennsylvania. He will visit at various points along the route.

* * *

R. D. Seely, sales manager of the Mason City Oil & Grease Co., Mason City, Ia., has just returned from a honeymoon trip to Chicago and eastern points.

Tidal Has Ingenious Method Of Gauging Each Well

Staff Special.
TULSA, Aug. 7

IN ORDER to keep an accurate production check on its wells, the Tidal Oil Co. makes an individual test on each well on each of its properties every three months. This work is part of the duty of the pumper who looks after the wells, and his report on individual production, coupled with other reports sent in during the three months, showing amount of work and new material used on each well to keep it on production, give an accurate record of the performance of each well. Such an analysis shows definitely whether or not each well is being operated at a profit, and indicates whether rehabilitation or abandonment is the wiser course in each case.

Results of tests on each well on a farm are sent in to the Tulsa office on the form shown with this article, known as "Report of Individual Well Production." The well trouble report, known as a "Pulling Ticket," also is reproduced herewith. The upper portion of this form is filled out by the pumper and sent to his lease foreman, the pumper keeping a duplicate for his record. The foreman turns it over to the clean-out foreman for that group of leases, who fixes up the well and fills in the lower part of the ticket, showing material used in putting the well back in shape. He also records the measured depth of the well and location of standing valve after he has repaired the well. By comparing this depth with the original log of the well, the amount of mud or cavings is arrived at, whenever, in the judgment of the superintendent, the cavings are too high in the hole, the air-cleaning out machine is sent to the well in due course and it is blown out.

The method used by the Tidal pumpers in obtaining the individual well gauges is interesting. A 50-gallon steel oil drum must be placed at the well for each barrel or more of production the well will make. Most of these tests are made on small production properties, where the wells are pumped off in a comparatively short time, and where most wells make around one barrel per day each. Assuming that the well makes something like one barrel a day, the drum is wheeled up to it, either on a wheelbarrow or on a specially constructed two-wheeled cart. The lead line is disconnected and the well is pumped directly into the barrel until it is pumped off. The drum has a siphon arrangement in the bottom for the purpose of siphoning off water, so that only oil remains in the drum. After the well has been pumped off, the amount of oil in the drum is measured and its contents in barrels or fractions of barrels is computed by means of a specially made scale, subdivided to show number of gallons per inch in a 50-gallon drum.

For getting the oil from the drum back into the well, a rubber hose 10 or 12 feet long and ½-inch in diameter, fitted with a 2x½-inch reducer for connection to the casing head, and at the other end having a ½-inch stop cock between two nipples. The vacuum is shut off from the well, the stop on the hose is opened, and the vacuum in the casing pulls all the oil from the barrel down into the hole. The well is then ready to be put back on the pump. For straight-time water wells, or wells which are pumped 24 hours a day, making lots of water and little oil, it would often require two to three hours to accumulate 15 or 20 gallons of oil in the drum. On these wells, the pumper takes a one-hour test at two periods in the day to find what the well will make in that time. The oil recovered in an hour is then multiplied by 24 to arrive at the well's actual daily output.

Form 433. 50Blks. 2-24. Lowe.

TIDAL OIL COMPANY

Date 5/14 1925
Farm Lucia Gilmore
Well No. 6
Cups ____ Lower Valve bad Tubing ____
Condition of Jack good
Remarks: ____
O P Cowby Pumper

Date Pulled 5-7 1925
Causes found for not pumping: Cups were gone and lower seat grooved
New material put in well: 2-Cup Drop Valve
Cups 4 Balls and Seats 1 Barrel 1
Remarks: Standing valve depth 1116'
total depth 1134'
16 ft of mud
W. Dallison Teamster

Tidal Oil Co. "Pull Out Ticket," as filled out by pumper and clean-out foreman.

Home Oil Elects Officers

OSKALOOSA, IA.—New officers for the Home Oil Co., this city, were elected at a recent semi-annual meeting of the company. They are: C. L. Dean, president; E. J. Morris, vice-president; and K. L. Dean, secretary, treasurer and general manager.

Directors include, besides C. L. Dean and Mr. Morris, I. E. Mathew, W. S. Utterback and J. H. Walton.

PETROLEUM
and its Products

WRITE OR WIRE
FOR QUOTATIONS

Marietta, Ohio Refinery
operated on Pennsylvania Crude

Findlay, Ohio Refinery
operated on Ohio Crude

Coffeyville, Kansas Refinery
operated on Midcontinent Crude

The
NATIONAL REFINING Co.
National Headquarters
NATIONAL BLDG.
CLEVELAND OHIO

3 MODERN REFINERIES
COFFEYVILLE, KAN.-FINDLAY, O.
MARIETTA, O.

NEW TANK WAGON DISCOUNTS
Offer Big Advantage

To Jobbers who Furnish Customers With Savegas Pumps

The new schedule of tank wagon prices with discounts based on quantity used over specified periods, makes the SAVEGAS self-serve pump for individual underground installation, of even greater value than ever before.

With the new gasoline prices in effect, jobbers can use this wonder SAVEGAS pump to great advantage in securing and holding new customers. The advantages to the jobber who supplies these pumps are obvious. Repeat business soon pays for it.

Model B, for 6 barrel or underground storage, ½ gal. stroke, 6 ft. hose, only ..$17.50
Model C, for underground storage, ½ gal. stroke, 6 ft. hose, only ..$19.50
Model F, Bucket pump for kerosene and lubricating oils, underground storage, no hose ..$18.50
Model G, for underground storage, 1 gal. stroke, 8 ft. hose. ..$28.00

Write Today for Descriptive Circular
SAVEGAS PUMP SALES CORP.
343 S. Dearborn St. Chicago, Ill.

CHAMPION

Single and Two Stage —Annular Ball Bearings—Automatic Compressor—Units "K" and "R".

The answer to the almost usual question— "Why is it Champion 'Check Valves' give no trouble and never wear out?"

The "patented" Champion design check valve has a floating disc which is *"air balanced"* and *does not pulsate* with each stroke of the compressor and is therefore noiseless and *not subject to constant wear*—this eliminates the annoyance of frequent replacements which are necessary with check valves commonly used.

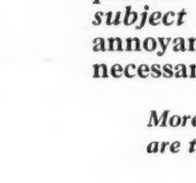
More "reasons why" you should buy Champion are told in our new catalog—better write for it.

CHAMPION PNEUMATIC MACHINERY CO.

8168 SO. CHICAGO AVE. CHICAGO, U. S. A.

Single and two Stage

Air Compressors



COUPON BOOKS

of Every Description

for the Filling Station

We will gladly send samples and prices upon request

Allison Coupon Co.

Indianapolis Indiana

Stoll to Lay Pipe Line in Tennessee Field

LOUISVILLE, Aug. 8.—Stoll Oil Refining Co., Louisville, has contracted to lay a pipe line from Windle, Tenn., into the Tinsley Bottom oil field of Tennessee. The company announced it had made long time contracts with the producers of Tinsley Bottom and will pay the Somerset prices for the oil.

The line will be about 20 miles long and the Stoll company believes it will stimulate production in Tinsley Bottom.

Pan American Nets 7% Barnsdall Income Grows

NEW YORK, Aug. 8.—Pan-American Petroleum & Transport Co., the former Doheny company now controlled by the Standard Oil Co. of Indiana and affiliated interests, netted $9,584,964 in the first quarter after taxes, interest, and depreciation, equivalent to $3.49 per $50 share on the average amount of stock outstanding. Net earnings of all of 1925 were equivalent to $5.85 a share. The company also issued this statement:

"The accounts for the second quarter of the year have not yet been completed, but sales made and prices received during the first quarter have been and are being maintained, and the net profit, we feel confident, will run at about the same rate.

"The balance sheet shows total assets to have been $202,000,000 as of March 31. Current assets aggregated $61,299,000 against current liabilities of $23,494,000, representing a ratio of 2⅔ to 1. Current assets exceeded current liabilities of $37,805,000 and the combined current liabilities and bonded debt by $18,598,000. Cash amounted to $19,018,000 and oil inventories to $17,300,000; the oil inventories were valued at cost or subsantially less than sales price.

"As compared with Dec. 31, the net current asset position showed an improvement of $9,216,000; this, notwithstanding dividends have been paid or accrued at the rate of $6 per share per annum, as compared with $4 per share for 1924."

Hills-McCanna Co., Chicago, engineers, have appointed Guy L. Warden and A. R. Chandler as their California representatives, succeeding E. D. Bullard, who requested a release to devote his efforts to his own lines.

Mr. Warden was formerly chief engineer of the Hopewell division of the Dupont interests, and Mr. Chandler represents the Universal Oil Products Co. offices of the Hills-McCanna company are in the Pacific Electric Bldg., Los Angeles.

Keen & Woolf Put Man in Chicago Territory

HOUSTON, Aug. 6.—J. K. Fagin, formerly assistant sales manager of the old White Oil Corp., is now representing the Keen & Woolf Oil Co., with headquarters in Chicago. Mr. Fagin's connection with the Keen & Woolf Co. became effective July 1, last.

R. E. Benner, sales manager, announces the increase of the Keen & Woolf plant capacity by 30 per cent, effective July 15, and the present running to stills daily of 1800 and 2000 barrels of crude.

Marland Building Gasoline And Gas Booster Plant

PONCA CITY, OKLA., Aug. 7.—Marland Refining Co. is building an 8,000,000 cubic foot gasoline plant and gas booster station in the Rainbow Bend field, Kan., which will have seven 225 h.p. Miller direct-driven units, according to R. R. Owens superintendent of the gasoline department.

The plant will have a daily production of 15,000 barrels and dispose of 6,000,000 cubic feet of gas daily to the Empire Oil & Gas Co.'s lines north of Arkansas City, Kan. Work on the plant was started July 16.

Two Oil Companies To Picnic

BARTLESVILLE, OKLA.—The annual Trico picnic for employes of the Amity Gasoline Co. and The Wiser Oil Co. of this city, has been planned for Sept. 5 to be held two miles west of Dewey, Okla. A good program, as well as a good time, is assured, according to Sam Watt, secretary of the Wiser company's western division.

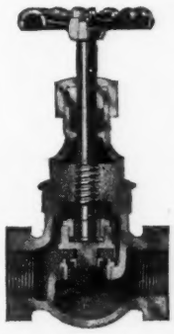
DAYTON, O.—Englerth & Kowaski, who recently formed a partnership for the wholesaling of gasoline, kerosene and motor oils, have taken over the distribution of products of the Ohio Refining Co. in Montgomery county.

Mr. Englerth was formerly with the Consumers Oil Co. at Dayton, and Mr. Kowaski was formerly salesman with the same company. Both left the company in February, 1925, to engage in their own business.

Succeeds Father in Business

BRADY, NEB.—The T & O Oil Co. has changed its name to the Brady Filling Station, of which Harold Oldfather is proprietor. C. E. Oldfather, father of Harold Oldfather, died in April, and the latter bought out Mr. Trindel's interests in the T & O company.

OKMULGEE, OKLA.—The Marland Refining Co. and Magnolia Petroleum Co. have each finished a service station here.



Sectional view, Fig. 128 screwed, Jenkins Extra Heavy Bronze Globe Valve

Strength—
where strength is needed

—is a characteristic of every genuine Jenkins Valve.

Note in this sectional view of a Jenkins Extra Heavy Globe Valve, the distribution of metal throughout the valve. There are no weak parts, and all parts subjected to heavier service are built with an extra thickness. Note the powerfully threaded bronze spindle, which is made of manganese bronze.

There are Jenkins Valves in standard, medium and extra heavy patterns obtainable through supply houses everywhere.

You can obtain, when you so order, valves specially packed and specially tested for oil service.

JENKINS BROS.
80 White Street ..... New York, N. Y.
524 Atlantic Avenue ..... Boston, Mass.
133 No. Seventh Street ..... Philadelphia, Pa.
646 Washington Boulevard ..... Chicago, Ill.
JENKINS BROS., Limited
Montreal Canada London, England

Always marked with the "Diamond"
Jenkins Valves
SINCE 1864

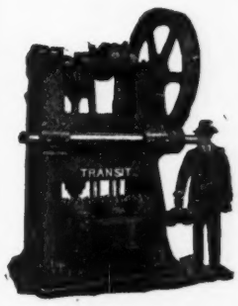
Vogt Products For The Oil Refiners

We manufacture Paraffine Wax Presses, Distillate Chilling Machines, Stills, Auto Truck Tanks, Special Refinery Equipment, Boilers, Refrigerating Machinery, Drop Forged Steel Valves, and Fittings. Bulletins on request.

Henry Vogt Machine Co.
Incorporated
Louisville, - Ky.

Branch Offices
New York Chicago
Philadelphia Dallas

TRANSIT PUMPS



Standard
PIPE LINE, REFINERY, FIELD
Pumps

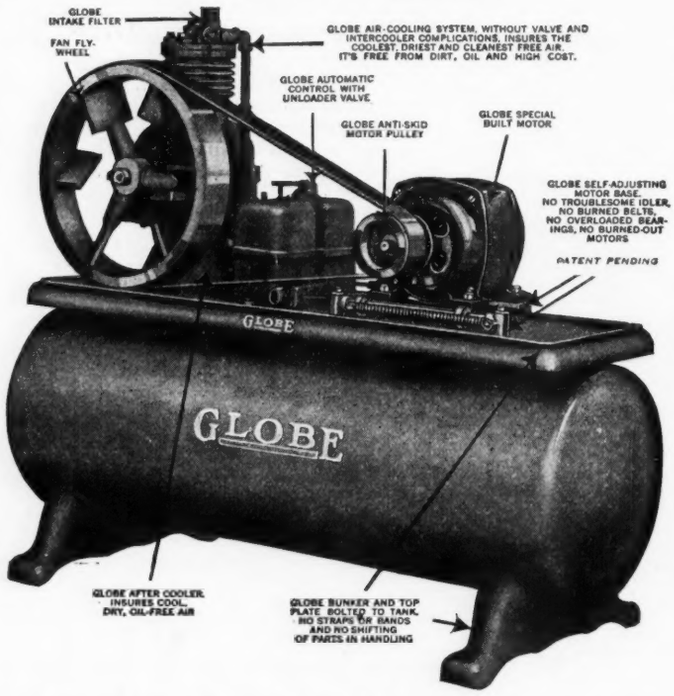
National Transit Pump & Machine Co.
OIL CITY, PA.
District Offices: **New York, Philadelphia, Tulsa, Cleveland, Pittsburgh, Houston and Denver**

GLOBE AIR COMPRESSORS

Are Always Found in the Most Up-To-Date Service Stations

THEY insure patron's a dependable free air supply at all times and Care-Free Service for the operator.

Notice the many exclusive features not found in other makes. These features are necessary for satisfactory operation.


GLOBE INTAKE FILTER
FAN FLY-WHEEL
GLOBE AIR-COOLING SYSTEM, WITHOUT VALVE AND INTERCOOLER COMPLICATIONS, INSURES THE COOLEST, DRIEST AND CLEANEST FREE AIR. IT'S FREE FROM DIRT, OIL AND HIGH COST.
GLOBE AUTOMATIC CONTROL WITH UNLOADER VALVE
GLOBE ANTI-SKID MOTOR PULLEY
GLOBE SPECIAL BUILT MOTOR
GLOBE SELF-ADJUSTING MOTOR BASE. NO TROUBLESOME IDLER, NO BURNED BELTS, NO OVERLOADED BEARINGS, NO BURNED-OUT MOTORS
PATENT PENDING
GLOBE
GLOBE
GLOBE AFTER COOLER INSURES COOL, DRY, OIL-FREE AIR
GLOBE BUNKER AND TOP PLATE BOLTED TO TANK. NO STRAPS OR BANDS AND NO SHIFTING OF PARTS IN HANDLING

GLOBE MANUFACTURING COMPANY, Battle Creek, Mich.

Barrel Flanges That Combine Low Cost and High Quality

Made of pressed steel.
Low welding cost. Proper tolerances insure perfect fit of plugs.
Tight Seal.
Flange flush with barrel shell.

Gasket surface smooth and flat.
Made in ¾", 1½" and 2" sizes.
Standard thread as used by all barrel manufacturers.

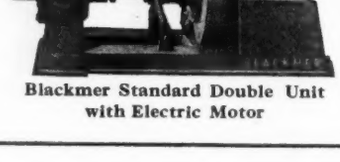
Write us for prices

THE BETTCHER STAMPING & MFG. COMPANY
CLEVELAND, OHIO

Blackmers Sell More Blackmers

There were 25% more Blackmer Rotary Pumps in operation at the end of 1924 than there were at the end of the previous year. And there are today ***twice*** as many Blackmers operating as there were four years ago.

Satisfied owners, "pass the good word along" and so Blackmers sell more Blackmers.



Blackmer Standard Double Unit with Electric Motor

BLACKMER ROTARY PUMPS

are made in capacities ranging from 3 to 500 G. P. M. and in each is incorporated the Blackmer Principal of automatic take-up-for-wear.

Let our engineers help you to solve your pumping problems.

BLACKMER ROTARY PUMP Co.
Petoskey, Mich.

Industrial Notes

Frank B. Carr and H. R. Leland, Tulsa, have organized a new company which will be a truck equipment supply house, handling truck tanks, cabs, dump equipment, winches, bodies, springs, trailers, hoists, air cleaners and other essential equipment to the operation of motor trucks.

Mr. Carr, who has had considerable experience in motor truck operation, has been for five years with The White Co. at Tulsa, promoting sales to the oil industry. When he resigned from the company to devote his time to the new organization, he was branch manager of The White Co.'s factory branch at Tulsa.

Mr. Leland, who was at one time sales manager of the Parkersburg Rig & Reel Co., is now in charge of the Tulsa branch of the Columbia Steel Tank Co., which position he holds in addition to his duties with the newly-formed company.

* * *

General American Tank Car Corp., Chicago, has moved its Los Angeles offices from the Pacific Finance Bldg. to the Bartlett Bldg. effective Aug. 1.

* * *

W. A. Jones Foundry & Machine Co., Chicago, has opened a sales office at Minneapolis to cover all of Minnesota, North and South Dakota, and part of Iowa and Wisconsin. The offices are at 614 Builders Exchange, and in charge of F. S. Van Bergen, district sales manager. The regular Jones line will be handled in this territory from Minneapolis, including speed reducers, friction clutches, gears, iron pulleys, flexible couplings, line shaft equipment and miscellaneous power transmission specialties.

* * *

Standard Turbine Corp., Scio, N. Y., has developed a relief valve for pressures up to 2000 pounds for use in the pressure flooding operations now being done in the Bradford and Allegany county fields. The valve body proper is of steel but the seat and valve are of monel metal. An ordinary relief valve has been found unsuitable for high pressures since the relation of valve openings and spring characteristics is not proper, the company claims.

* * *

Standard Tank Car Co., Sharon, Pa., has just received an order from the Phillips Petroleum Co., Bartlesville, Okla. for 300 8050 gallon capacity insulated tank cars, 40-ton trucks.

It has also closed an order with the White Star Refining Co., Detroit, for 53 10,050 gallon 50-ton tank cars.

* * *

Hills-McCanna Co., Chicago, manufacturer of oil refinery equipment, maintains in its Chicago stock, bolts and nuts for condenser box service. Hills-McCanna's 45 alloy is claimed to give good service at refineries where condensing water conditions are bad.

On the Lazy Bench

"Am They a Hell?"

THIS was the burning question chosen for the subject of the first sermon to be delivered by a newly appointed pastor of a colored church in Alabama.

As he faced the large audience, he began "Bredern, de Lord made de world round like a ball."

"Amen!" cried the congregation.

"And de Lord made two axles for de world to go round on, and He put one axle at de north pole and one axle at de souf pole."

"Amen!" agreed the congregation.

"And de Lord put a lot of oil and axle grease in de center of de world so as to keep the axles well greased and oiled."

"Amen!" said the congregation.

"And then a lot of sinners dig wells in Pennsylvania and steal de Lord's oil and grease. And they dig wells in Kentucky, Oklahoma, Texas, and California, and in Mexico and Russia, and steal de Lord's grease and oil.

"And some day dey will have all of de Lord's oil and grease, and dem two axles is gonna git hot. And den, dat will be hell, bredren, dat will be hell!"

—From a Reader

◈ ◈ ◈

Old Noah found Mt. Ararat,
And there he beached the Ark.
"For months and months and months,"
he said,
"I've sought a place to park!"

—Ventura Mission

◈ ◈ ◈

An Honest Man, At Last!

Diogenes (meeting Supply Man)—Well, sir, whaddya know?

S. M.—Oh, nothing much.

And Diogenes blew out his lantern and went to bed.

—Rig and Reel

◈ ◈ ◈

Pole the Jury

The prosecuting attorney was examining a negro witness.

"Now," Mose said, "I think that...."

"I told you not to tell us what you think."

"But, boss," said Mose apologetically, "I don't want to know what you think. Tell us what you know."

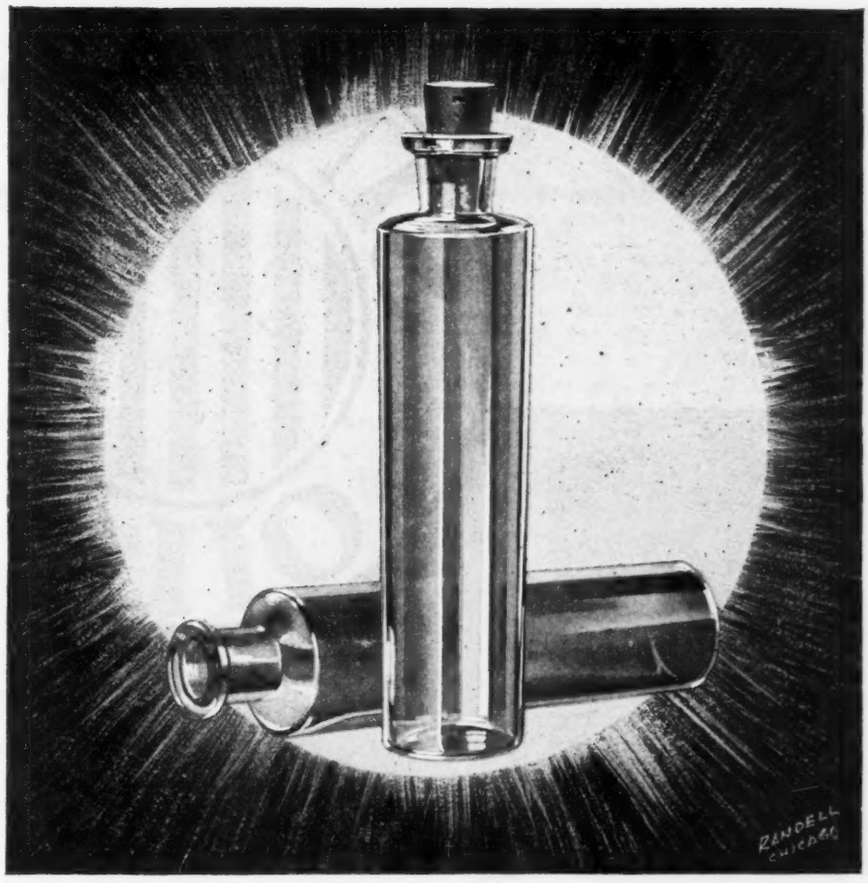
"I ain't no lawyer. I can't talk without thinking."

◈ ◈ ◈

They Call it a Prayer

Backward turn backward, O time in thy flight,
Give me a girl whose skirts are not tight;
Give us a girl whose charms, many or few,
Are not exposed by too much peekaboo;
Give us a girl, no matter what age,
Who won't use the street for a vaudeville stage;
Give us a girl not too shapely in view,
dress her in skirts that the sun can't shine through.

—Bridgeport Driller



FLASHING SAMPLES
KINDLE SALES!

LABORATORY tests determine the volatility of your various lubestocks, kerosene, etc., but what about the "flash and fire" point of your samples sent out to the prospect.

Our clear flint glass Sample Oil Bottles will display your gasoline, kerosene, lubricating oils and other viscous products to advantage. Crystal transparency, square shoulders and ground and polished bottoms permits perfect inspection of contents and accurate, preliminary color and viscosity tests.

Their true representation of quality, after *flashing* attention, *fires* the interest of the buyer.

Available in 2 oz., 4 oz. and 8 oz. sizes with extra long high grade "Diamond I" Corks if desired.

Illinois Glass Company

Established 1873

ALTON, ILLINOIS

Branches in All Principal Cities

THE SINCLAIR trade-mark does more than identify oils of quality.

It symbolizes the ideals of our Company. It represents our ambition to co-operate with Sinclair dealers to attain mutual growth.

Sinclair dealers know that it also represents our obligation to maintain their prestige with a product as conscientious as their service.

We stay behind the obligation — and the trade mark guarantee: —

Your money's worth or your money back.

SINCLAIR REFINING COMPANY

NEW YORK
Sinclair Oil Bldg., 45 Nassau St.
Telephone: Rector 9320

CHICAGO
22nd and Rockwell Streets
Telephone: Crawford 2000

Cable Address: "Lucent"

SINCLAIR OILS

REFINERY-TANK WAGON MARKETS

Mid-Continent Burning Oils Firm; Gasoline Prices Waver

Staff Special

TULSA, August 8

WITH the greater part of this week productive of lower motor fuel prices, and slashing of as much as ½ cent per gallon in some grades, quickly followed by advancing quotations, petroleum markets have been such as would cause the average market observer to wonder just what will be the outcome in the immediate future.

Natural gasolines have gradually eased off in price, but distillates, gas and fuel oils moved steadily upward with a continuation of coal strike talk giving refiners added advantage. Kerosenes were firmer. Lubricating oils continued steady. Waxes were strong with goods not freely offered.

As evidence of the quiet condition of the gasoline market Monday, several refiners who had been quoting U. S. Motor gasoline at 12¼ cents direct to the trade, dropped their price to 12 cents. Carload marketers were able to purchase more material at 11¾ cents for either prompt or future delivery. Announcement Tuesday by Mid-Continent Petroleum Corp. of ½-cent reduction in price of 56-58, 450 end point and 58-60 U. S. Motor gasolines brought its quotations to 11 and 11½ cents, respectively, which prices were quickly met by many other refiners.

This drop in prices brought in a large number of orders from jobbers who had held off buying in anticipation of easier markets, and from marketers who had sold short considerable material for August delivery. The so-called buying wave then resulted in some refiners again advancing prices ¼ cent, bringing their U. S. Motor back to 11¾ cents, but others not so optimistic of an immediate upswing maintained their former low quotations.

Naturally, such conditions have caused much speculation as to cause and effect. It is understood that troublesome competition brought about the radical price reduction, but while many refiners and others felt that quotations were due to be lowered over the week, a ½-cent reduction in tank car prices at a single stroke, was, to say the least, considerably more than the most bearish expected. To quickly follow this with higher prices appears to have puzzled the average buyer now seeking gasoline.

Expecting lower prices because of large production of motor fuel, some refiners frankly asserted they could see little improvement ahead until this condition was cured. Reduction in gasoline stocks at the 124 Mid-Continent plants reporting to National Petroleum News was roundly 2,000,000 gallons in July, which is considered much too small for the heavy consuming season. Although it is argued that Mid-Continent gasoline stocks at the end of July represented only 13 days' supply, which on the face of things suggests forcibly a strong statistical position, it is undeniable that sufficient material has recently been pushed on the market to cause weakness.

Bureau Figures Bearish

The June report of the U. S. Bureau of Mines proved a disappointment in many quarters. Increase in stocks of crude in the United States, particularly in California, which state is being watched rather closely by Mid-Continent refiners, and the withdrawal from storage of only 22,000,000 gallons of gasoline in the whole country, proved to be factors which added no optimism to the general Mid-Continent situation. Nevertheless, domestic gasoline consumption was 27 per cent in excess of that of June, 1924.

With recent talk of forced curtailment of refinery runs if prices are to be maintained, comes the suggestion of an easier crude market later in the year. With the present attractive crude prices it is understood that producers were more willing to offer stored oil, and one offering of a large quantity was said to have been made this week at a 3-cent premium above the Prairie's posted price. Refiners generally express no difficulty in securing crude at present, and feel that any consequential reduction in runs to stills would cause present holders of crude to become even more active to move stocks where possible before fall.

Today's reductions in eastern and export gasoline prices apparently had little direct effect on gasoline prices in the short Saturday business day, but it was generally felt that they would reflect in a bearish manner next week. With a reduction of 1 cent in export markets by Standard of New Jersey, Oklahoma refiners were receiving only 13.55 cents and north Texas refiners 13.65 for their 64-66, 375 end point gasoline covered by contracts with that company. Exporters indicated they could buy this grade in the open market today at 13½ cents in Oklahoma.

Export Business Light

With one exception, new export business was practically nil. It was understood that Standard of New Jersey was taking only the minimum amount of 64-66 contract gasoline from refiners, who were therefore more willing to sell in the open market at concessions. Sinclair Refining Co. purchased 1,400,000 gallons in Kansas, Oklahoma and north Texas for shipment over August, and paid on the basis of 13⅝ cents Group 3. Oklahoma and Kansas refiners contributed 100 cars towards the order.

On Monday 56-58, 450 end point gasoline was moving at from 11¼ to 11½ cents generally, but gradual weakening brought more offerings at 11 cents, and occasional shading of this price was reported. Saturday's market closed at 11 to 11¼ cents, with refiners for the most part holding their quotations to the jobber at 11¼ cents. Other heavy grades were held proportionally with the 58-60, 450 end point and 56-58, U. S. Motor closing around 11¼ to 11½ cents.

Natural gasolines lost practically ½ cent and were moving today at 13¼ cents, with buyers able to find occasional cars at 13 cents. Material for future shipment was more easily found at 13 cents, and some manufacturers were

(continued on page 43)

All prices and market information printed herein have been gathered by the staff of National Petroleum News from reliable sources and so far as can be ascertained thoroughly represent the going market as defined for each product on the date given for those particular prices. Both buyers and sellers have been checked in the gathering of this information and actual sales studied.

These prices and this information are subject at all times to correction for errors. Anyone having knowledge of any facts which would indicate anything different from the information which is given, is especially urged to send in those facts to the head office of National Petroleum News at once, or take them up with the nearest representative. All such facts will be promptly and thoroughly investigated.

The staff of National Petroleum News is cognizant of the fact that this market information has come to have a high standing in the industry. It wants to not only maintain that standing, but to improve it and to that end, invites the co-operation of the entire oil industry.

JENKINS CRACKING PROCESS

PRODUCES QUALITY GASOLINE

Facts from performance

PERCENTAGES or PROFITS?

■ ■ ■

Large percentage yields from a cracking process are not necessarily indicative of profits. You, the refiner, must find the percentage yield which gives you the greatest economic balance in refining. That is when you make your profits,—and it is profit which must be your first consideration.

The Jenkins Cracking Process is so flexible in operation that you can readily obtain this economic balance. It gives you quality products, cheaply made, readily marketable, and places no unnecessary burden upon the balance of your refinery.

Graver Builds

Tanks
- *Welded*
- *Riveted*
- ~~Rivet~~ Slow (Riveted, Inside & Outside Welded)
- *Structural Supports*
- *Tower Tanks*
- *Standpipes*
- *Any Size Tanks Erected Anywhere*

Refinery Equipment

Jenkins Cracking Process

Stacks-Breechings

General Steel Plate Construction

Water Softeners
- *Hot Process*
- *Cold Process*
- *Zeolite*
- *Household*

Filters—*Pressure*

Purifying Systems *for* **Swimming Pools**

GRAVER *Founded 1857* *Corporation*

EAST CHICAGO, INDIANA

NEW YORK Grand Cent. Term. | CHICAGO Steger Building | TULSA Atlas Life Bldg. | HOUSTON West Building

Any office can give you complete information

Refinery Markets on Light Oils and Lubricants

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

GASOLINE AND NAPHTHA

PENNSYLVANIA	Prices Aug. 10	Prices Aug. 3	Prices July 27
52-54 Naphtha	-14	-14¼	14¼-14½
54-56 Naphtha	-14¼	-14½	14½-14¾
58-60 Gasoline	14½-15	14¾-15	15 -15¼
60-62 Straight-run gasoline	15 -15½	15½-15¾	16 -16¼
62-64 Straight-run gasoline	16 -16½	16½-16¾	16½-16¾
64-66 Straight-run gasoline	16½-17	17 -17¼	17 -17½
68-70 Straight-run gas. 350 E.P.	-18	-18	18 -18¼
68-70 Straight-run gas. 305-320 E.P.	19½-20	-20	-20
70-72 Straight-run gas. 300-305 E.P	-21	-21	-21
OKLAHOMA			
48-50 450 E. P. naphtha	-10¾	11 -11¼	11½-11¾
50-52 450 E. P. naphtha	-10¾	11 -11¼	11½-11¾
56-58 450 E. P. gasoline	10⅞-11¼	11¼-11½	11¾-12
56-58 U. S. Motor gasoline	11⅛-11½	11½-11¾	12 -12⅛
58-60 U. S. Motor 437 E. P.	11⅜-11¾	11¾-12	12⅛-12⅜
60-62 400 E. P. gasoline	12⅝-13	13 -13¼	13½-13¾
64-66 375 E. P. gasoline	13½-13¾	14⅜-14⅝	14⅝-14⅞
68-70 350 E. P. gasoline	14½-14¾	15 -15¼	-15¾
KANSAS*			
56-58 450 e. p. gasoline	11¼-11¾	11¾-12	-12¼
58-60 U. S. Motor gasoline	11¾-12¼	12¼-12½	-12¾
60-62 400 e. p. gasoline	-13¼	13½-13¾	14 -14¼
64-66 375 e. p. gasoline	14 -14½	14¾-15	15 -15¼
NORTH TEXAS			
48-52 450 E. P. naphtha	-10¾	11¼-11½	11¼-11½
56-58 450 E. P. gasoline	10¾-11	11⅜-11⅝	11¾-12
58-60 450 E. P. gasoline	10⅞-11	11⅜-11⅝	12 -12¼
58-60 U. S. Motor gasoline	11⅛-11½	12 -12¼	12¼-12⅜
60-62 400 E. P. gasoline	12½-12¾	13¼-13⅜	13½-13¾
64-66 390 E. P. gasoline	13¼-13½	14 -14¼	14½-14¾
64-66 375 E. P. gasoline	13½-13¾	14¼-14½	-14¾
68-70 350 E. P. gasoline	14½-14¾	15¼-15½	-15¾
NORTH LOUISIANA			
56-58 U.S. Motor gasoline	11¼-11½	11¾-12	12¼-12½
58-60 U.S.Motor gasoline	11½-11¾	12 -12¼	12½-12¾
ARKANSAS			
58-60 450 E. P. gasoline	11⅜-11¾	12 -12¼	12½-12¾
58-60 U. S. Motor gasoline	11⅝-12	12¼-12½	12¾-13
64-66 375 E. P. gasoline	14 -14¼	14½-14¾	15 -15¼
CALIFORNIA			
54-56 U. S. Motor gasoline	-11	-11	-11
42-45 Engine distillate, 445-480 E.P.	7½- 9½	7½- 9½	7½-11½

Note: This is without the 2-cent state tax included in the price of California refiners for shipments within the state.

NEW ENGLAND (F. O. B. Boston and Fall River)			
U. S. Motor gasoline	-14⅝	-14⅝	-15⅜

NATURAL GASOLINE

(Note: End point of all grades, not over 375°F.)

OKLAHOMA			
Grade Double A	13 -13¼	13½-13¾	-14
Grade A	13 -13¼	13½-13¾	-14
Grade Double B	13 -13¼	13½-13¾	-14
Grade B	13 -13¼	13½-13¾	-14
Grade C	13 -13¼	13½-13¾	-14

NOTE—Specifications adopted by Ass'n of Nat. Gaso. Manufacturers:
Grade Double A—80-87.9 gravity, 90% recovery, not over 375 E. P.
Grade A—72-79.9 gravity, 90% recovery, not over 375 E. P.
Grade Double B—84-92 gravity, 85% recovery, not over 375 E. P.
Grade B—76-83.9 gravity, 85% recovery, not over 375 E. P.
Grade C—80-90 gravity, 78% recovery, not over 375 E. P.

NORTH TEXAS			
*Grade Double A	13 -13¼	13¾-14	-14
*Grade A	13 -13¼	13¾-14	-14
*Grade Double B	13 -13¼	13¾-14	-14
*Grade B	13 -13¼	13¾-14	-14
Grade C	13 -13¼	13¾-14	-14

*F. O. B. Breckenridge.

CALIFORNIA			
73-78 375 E. P.	13 -13½	13 -13½	13 -13½
PENNSYLVANIA			
68-70 Grav. 437 E. P.	-16	-16	16 -16¼
64-66 Grav. 437 E. P.	-16	-16	16 -16¼
60-62 Grav. 437 E. P.	-16	-16	-16
68-70 Grav. 420 E. P.	-17	-17	-17

BURNING OILS

PENNSYLVANIA			
45 Water White Kerosene	6 - 6¼	6 - 6¼	6¼- 6¼
46 Water White Kerosene	6¾- 7	6¾- 6⅞	6⅞- 6¾
47 Water White Kerosene	7¼- 7½	7¾- 7½	7¼ -7½
300 Burning Oil	- 7½	- 7½	- 7½
OKLAHOMA			
41-43 Water White Kerosene	4⅛- 4¼	4 - 4¼	4 - 4⅛
42-44 Water White Kerosene	4⅛- 4⅜	4⅜- 4½	4¼- 4⅜
KANSAS			
41-43 w. w. kerosene	- 4½	4¼ -4½	4¼- 4½
NORTH TEXAS			
41-43 Water White Kerosene	4 - 4⅛	4 - 4⅛	4 - 4⅛
42-44 Water White Kerosene	4⅛- 4½	4⅛- 4⅜	4¼- 4⅜
NORTH LOUISIANA			
41-43 Water White Kerosene	4¼- 5	- 4¼	- 4¼
ARKANSAS			
42-44 Water White Kerosene	- 5	4¼- 5	4½- 4¾
CALIFORNIA			
40-42 Water White Kerosene	7½- 8	7½- 8	7½- 8
NEW ENGLAND (F. O. B. Boston and Fall River)			
40-43 Water White Kerosene	- 6¼	- 7	- 7

NEUTRAL OILS

PENNSYLVANIA (Viscosity at 70°F.)			
220 Vis. No. 3 Assoc. Filt.	-26½	-26½	26½-27
200 Vis. No. 3 Assoc. Filt.	23½-24	23 -23½	-24
180 Vis. No. 3 Assoc. Filt.	21 -21½	20½-21	-22
150 Vis. No. 3 Assoc. Filt.	19 -19½	18½-19	18½-19
(Non-Viscous)			
34 Grav. 350-360 Flash	7¾- 8	- 8	- 8
36 Miners Neutrals 300-305 Flash	6¾- 7	- 7	- 7
OKLAHOMA (Viscosity at 100°F.)			
70 Vis. No. 2½-3 color	5¼- 6¼	5¼- 6¼	5¼- 6¼
100 Vis. No. 2 color	6 - 6¼	6 - 6¼	6 - 6¼
100 Vis. No. 2½-3 color	5¾- 6¾	5¾- 6¾	5¾- 6¾
150 Vis. No. 3 color	10 -11	10 -11	10 -11
150 Vis. No. 4 color	10½-10¾	10½-10¾	10½-10¾
180 Vis. No. 3 color	10½-11½	10½-11½	10½-11½
180 Vis. No. 4 color	11 -11¼	11 -11¼	11 -11¼
180 Vis. No. 5 color	10 -11	10 -11	10 -11
200 Vis. No. 3 color	11¼-13	11¼-13	11¼-13
200 Vis. No. 4 color	11¾-12¾	11¾-12¼	11¾-12¼
200 Vis. No. 5 color	10 -12	10 -12	10 -12
220 Vis. No. 3 color	14½-15	14½-15	14½-15
220 Vis. No. 4 color	14¼-14½	14¼-14½	14¼-14½
220 Vis. No. 5 color	13 -14	13 -14	13 -14
240 Vis. No. 3 color	16 -16½	16 -16½	16 -16½
240 Vis. No. 4 color	15¾-16	15¾-16	15¾-16
240 Vis. No. 5 color	15 -15½	15 -15½	15 -15½
280 Vis. No. 3 color	17¾-18	17¾-18	17¾-18
280 Vis. No. 4 color	15½-17	15½-17	15½-17
280 Vis. No. 5 color	15¾-16	15¾-16	15¾-16
300 Vis. No. 5-6 color	18 -18½	18 -18½	18 -18½
GULF COASTAL (Viscosity at 100°F; cold test 0)			
100 Vis. No. 2 Color Unfilt. Pale.	7½- 8	7½- 8	8½- 9
200 Vis. No. 3 Color Unfilt. Pale.	12 -12½	12 -12½	13 -13½
300 Vis. No. 3 Color Unfilt. Pale.	14 -14½	14½-15	15½-16
500 Vis. No. 3½ Color Unfilt. Pale.	16 -16½	16½-17	17½-18
750 Vis. No. 4 Color Unfilt. Pale.	20½-21	21 -21½	22 -22½
200 Vis. No. 5½ Color Red Oil	10½-11	11 -11½	12 -12½
300 Vis. No. 5½ Color Red Oil	12½-13	13 -13½	14 -14½
500 Vis. No. 6 Color Red Oil	14½-15	14½-15	15½-16
750 Vis. No. 6 Color Red Oil	18½-19	19½-20	20½-21
CALIFORNIA (Viscosity at 100°F.)			
100 Vis. No. 2 color	13¼-14½	13½-14½	13½-14½
100 Vis. No. 3 color	9 -10	9 -10	9 -10
200 Vis. No. 3 color	14½-15½	14½-15½	14½-15½
300 Vis. No. 3 color	14 -16	14 -16	14 -16
450 Vis. No. 3½ color	19½-20½	19½-20½	19½-20½
550 Vis. No. 3 color	21½-22½	21½-22½	21½-22½
600 Vis. No. 3½ color	23½-24½	23½-24½	23½-24½
100 Vis. No. 5 color	8 - 9	8 - 9	8 - 9
200 Vis. No. 5 color	13½-14½	13½-14½	13½-14½
300 Vis. No. 5 color	14 -15	14 -15	14 -15
400 Vis. No. 5 color	16 -17	16 -17	16 -17
500 Vis. No. 5 color	17 -18	17 -18	17 -18
600 Vis. No. 6 color	18 -19	18 -19	18 -19
700 Vis. No. 7 color	19½-20½	19½-20½	19½-20½

CYLINDER STOCKS

OKLAHOMA			
190-200 Vis. at 210° Bright Stock	31 -36	31 -36	31 -36
150-160 Vis. at 210° Bright Stock	28 -32	28 -32	28 -32
600 E Stock, 140-150 Vis. @ 210°	18¼-20	18¼-20	18¼-20
600 Steam Refined Olive Green	7½-11	7½-11	7½-11
600 Steam Refined Dark Green	5¾- 6	5¾- 6	5¾- 6¼
Black Oil	4¾- 5	4¾- 5	4¾- 5
PENNSYLVANIA (1-inch Immersion Test)			
600 Steam Refined	16¾-17	17 -17½	-18
635 Steam Refined	21½-22	21 -22	21 -22
650 Steam Refined	-23	22 -23	22 -23
600 Flash	27½-28	27 -28	26½-28
600 Warren E	-23	-23	23 -23½
600 Oil City E	22 -22½	-22½	22 -22½
600 Filtered D	-28	-28	28½-29
Cold Test Stocks (bright filtered)	39 -40	39 -40	38 -40
Cold Test Stock (dark filtered)	37 -38	37 -38	36 -37
Black Oil	8 - 8½	8 - 8½	- 8

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher.)

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

Use and Occupancy Protection

IF FIRE consumed your plant today—you are no doubt fully protected against immediate loss. Are you protected against the weeks or months of unproductive idleness while you rebuild, or the loss incurred thru necessary maintenance of overhead charges?

A "Use and Occupancy" contract will give you this needed protection. A representative of this company will explain the advantage of this and other forms of coverage without obligation to you. Use the attached coupon for information about our service.

Some of those whom we serve

THE PURE OIL COMPANY
PARAGON REFINING COMPANY
WOFFORD OIL CO. OF GEORGIA
SEABOARD OIL CO. OF FLORIDA
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Refinery Markets on Wax and Heavy Oil Products

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

WAX

PENNSYLVANIA	Prices Aug. 10	Prices Aug. 3	Prices July 27
	(Per Pound New York)		
122-124 White Crude Scale	5⅜- 5½	5¼- 5⅜	5⅜- 5½
124-126 White Crude Scale	- 5½	5½- 5⅝	5½- 5⅝
OKLAHOMA	(Per Pound Group 3)		
124-126 White Crude Scale	5⅜- 5¼	5¼- 5⅜	5 - 5⅛
CALIFORNIA			
White Crude Scale	7½- 8	7½- 8	7½- 8

FUEL OIL

PENNSYLVANIA			
38-40 Fuel Oil	5¾- 6	5⅝- 5¾	5¾- 6¼
30-34 Fuel Oil	5 - 5¼	5 - 5⅛	5 - 5⅛
28-30 Fuel Oil	5 - 5¼	5 - 5⅛	5 - 5⅛
OKLAHOMA			
38-40 Straw distillate	- 3⅝	3½- 3⅝	- 3½
36-38 Straw distillate	- 3½	3⅜- 3½	- 3⅜
32-36 Gas oil	- 3¼	3⅛- 3¼	3 - 3⅛
26-30 Fuel oil (Bbl.)	1.15-1.17½	-1.10	1.00-1.05
24-26 Fuel oil (Bbl.)	-1.10	-1.05	.97½-1.00
24-26 Fuel oil (Buyers' cars)	1.05-1.07½	-1.00	.92½- .95
20-22 Fuel oil (Bbl.)	1.07½-1.10	-1.05	-1.00
50-60 Asphaltic content road oil	1.10-1.20	1.10-1.15	1.10-1.15
KANSAS*			
38-40 Light straw distillate	3¾- 3⅞	3⅝- 3¾	3½- 3⅝
36-38 Light straw distillate	- 3⅝	3½- 3⅝	3⅜- 3½
32-36 gas oil	3¼- 3⅜	- 3¼	3⅛- 3¼
24-26 fuel oil	1.15-1.17½	1.12½-1.15	1.00-1.05
26-30 fuel oil	1.20-1.22½	1.15 -1.17½	1.05-1.10

*F. O. B. refinery, Kansas destination.

NORTH TEXAS	Prices Aug. 10	Prices Aug. 3	Prices July 27
36-40 Straw Distillate	3½- 3⅝	3¼- 3⅜	3¼- 3⅜
32-36 Gas Oil (Gal.)	3⅛- 3¼	3 - 3⅛	- 3
24-26 Fuel, per bbl	1.10-1.15	1.10-1.12½	-1.00
GULF COASTAL			
Fuel	1.45-1.50	1.50-1.60	1.50-1.60
Gas Oil	5 - 5¼	5 - 5¼	5¼- 5¾
NORTH LOUISIANA			
32-36 Light Gas Oil (Gal.)	3¼- 3½	3¼- 3½	3¼- 3½
18-22 Fuel Oil (Bbl.)	1.02½-1.05	1.02½-1.05	1.00-1.05
ARKANSAS			
32-36 Gas Oil	- 3½	- 3½	3¼- 3½
Road Oil	- 3	- 3	- 3
CALIFORNIA*			
14-18 Fuel Oil (Bbl.)	1.50	1.50	1.50
14-18 Bunker Oil (Bbl.)	1.50	1.50	1.50
24-30 Gas Oil (Bbl.)	1.75	1.75	1.75
27 + Diesel Oil (Bbl.)	1.75	1.75	1.75

*Prices at southern California points. Prices at San Francisco and other coast points 5c per bbl. higher. San Joaquin valley 10c per bbl. less.

NEW ENGLAND (F. O. B. Boston and Fall River)			
30-32 gas oil (gal.)	- 5¼	- 5¼	- 5½
Fuel Oil (Bunker C) bbl	-1.75	-1.75	-1.73

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

(continued from page 89)

expecting shading below this figure next week, as buyers were largely taking only small lots for prompt shipment. The tight situation prevailing in north Texas forced buyers in that market to seek goods in Oklahoma. Texas prices ranged ¼ to ½ cent above Group 3 for the first time in some months.

As natural gasolines have continued higher in price that U. S. Motor blenders have been unable to produce a product which would allow a sufficient margin of profit, and practically no blend has been offered in the spot tank car market. Naphthas, as a result, have found slow movement. The best grades of treated material were held at 10¾ cents today, with practically no sales and untreated goods could doubtless be covered as low as 10 cents.

As a result of firming fuel and distillate markets, distress kerosene was eliminated, and although marketers were finding some 41-43 water white at 4 cents for resale, less material was offered below 4⅛ cents, and a larger amount moved to the trade at 4¼ cents. Several refiners have either reduced or discontinued the manufacture of 42-44 water white and 4½ cents is considered minimum today, with sales being made at 4¾ cents.

During the last few days refiners were less inclined to offer 38-40 straw distillate below 3⅝, and marketers were forced to do considerable shopping to find 3½ cents good for resale. Refiners have written business at 4 cents for delivery over the season, but so far as known this is the top price. One of the largest petroleum marketers who was unable to find anything over the season under 4 cents reported he was unable to sell the jobber at a profit over this price, and found some jobbers willing to take chance on what the open market afforded from month to month.

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Higher gas oil prices prevailed at the week end, and material below 3¼ cents was considered the exception. Some refiners demanded 3⅜ cents for light straw material, although sales were not reported today at this figure. Refiners were expecting further advances in line with anticipated higher fuel oil prices.

Most grades of fuel oil have advanced roundly 5 cents this week. With continued coal strike talk, refiners appear in much better shape to handle their fuel oil market than they do gasoline and buyers today were finding less material below $1.10, although one refiner was offering a little 18-22 goods at $1.05 yesterday. The 24-26 gravity below $1.10 was considered a fortunate purchase and 26-30 was largely held at $1.15 where refiners were willing to quote.

Mid-Continent refiners are predicting higher fuel prices over August, and they are at least partly justified in this belief by the fact that normally prices in several years have begun to stiffen in the early part of August. One refiner gave as a reason for the strength of fuels earlier this year the buying in the spot market by railroads whose contract figures are now from around $1.45 upwards, and who were therefore holding back contract shipments and taking advantage of open market prices.

Factors in Fuel Market

It would appear that any prediction of future fuel market should include in its scope at least the following possibilities: Coal strike, with resulting higher prices even though buyers at present are farly well protected; the effect of reduction in refiners' runs to stills as a result of weaker gasoline

markets; possibility that refiners who stored considerable 75 and 80-cent fuel would offer larger amounts at the present more attractive prices, thus tending to retard or soften an advancing market, and last, the possibility of a Mid-Continent crude price reduction.

Lubricating oils remained unchanged with refiners reporting a good domestic market. Export activity was quiet. 50-60 road oil held from $1.10 to $1.20 but the movement of Oklahoma road oil is slow with Arkansas refiners getting most of the business. Waxes were strong with practically no new sales this week as refiners were well committed, but their ideas were around 5½ cents for new business.

Unloading of 56-58 Gasoline Lowers Chicago Prices

Staff Special

CHICAGO, Aug. 8

DESIRE by refiners to move 56-58 450 gasoline now when it is as satisfactory to the motoring public as U. S. Motor, caused a further decline in the price of all motor fuels in the Chicago resale market this week. Those who have an ever supply of gasoline at their plants, naturally want to get rid of the 56 which may not be marketed easily in a few more weeks.

Of course, most refiners have some U. S. Motor material on hand but they are not anxious to move it. The normal spread of ½ cent between the two most popular grades of gasoline is tending to widen rather than narrow. U. S. Motor is quoted at 11¾ cents a gallon in Chicago by representatives of Group 3 refiners but the price can easily be shaded among marketers who represent plants in north Texas, Louisiana, and Arkansas. The price of 56-58 might be shaded (or hammered down) to 11 cents flat in some cases from its prevailing quotation of 11¼ cents.

There is practically no speculative buying. Jobbers are buying for current requirements which are as large as current requirements have ever been.

Refiners are not booking big orders but are taking care of the needs of their customers who are coming in for about what they are obliged to have. The tendency among distributors is to believe that tank car prices will be lower, and they likely do not feel any too secure with their current tank wagon structure since the tank wagon price reductions announced Saturday.

Weather is all the oil industry could wish for at this season. Almost all of Standard Oil Co. of Indiana territory was dry during the first half of last week. A few showers fell late in the week but only three points reported more than an inch of rainfall. There is just enough precipitation to keep roads firm and clear of dust. The weekly forecast for the same region, covering a period up to Aug. 15, is for generally fair weather with occasional scattered showers. Temperatures will be normal or below, the prediction says.

Demand for refined oil has picked up. Water white kerosene of 42-44 gravity is scarce. It is difficult for the time being to get car numbers on quality material and the price is 4½ to 4¾ cents a gallon with probably more of it being sold on the higher range. Lower gravity kerosene, 41-43, has advanced in price more than 42-44. The 4⅛ goods of last week has vanished and nothing can be bought under 4¼ now. The improvement in 41-43 might have been induced somewhat by the accruing confidence in distillate for domestic fuel next fall.

Some refiners already are asking as much as 4 cents a gallon flat for 38-40 straw distillate, generally called "stove distillate" by distributors. The 4-cent price is not a fair representation of the market, however. Distillate can be had on the current spot market as low as 3⅝ and 3¾ cents is probably the going price.

Gas oil prices have not changed much. being the same as last week, 3¼ to 3⅜ cents. demand is better, however, than it was last week.

The impending coal strike has not had such a bullish effect on coal as it has had on fuel oil. Soft coal, to say the least, is not agitated much by the flurry in the politics of hard coal; but fuel oils agitated. The result is that 24-26 refinery fuel from Oklahoma is being quoted at $1.10 a barrel and is actually hard to buy at that figure. However, sales are occasionally made for less. A popular notion is that the goods is fairly abundant and only sold under the market in cases where tanks are full to overflowing.

Smackover crude fuel is fairly strong in sympathy with 24-26 refinery material. Smackover is quoted at $1.05 to $1.10 and the marketers who deal in it in the Chicago market stated on Saturday that comparatively little was available under $1.07½.

W. D. Smith Joins Ad Agency

ST. LOUIS, Aug. 8.—Willard D. Smith, formerly with the St. Louis Pump & Equipment Co. as sales manager, is now with Yost & Gratiot, an advertising agency here.

Pennsylvania Gasoline Slightly Cheaper

CLEVELAND, Aug. 10.—Pennsylvania refiners believe the tank wagon price reductions in Pennsylvania and New York today had been largely discounted, although they say there may be some readjustments. It was too early today to determine the full effect of the tank wagon price reductions but the next two or three days should reveal the strength or weakness of the present market structure.

Prices of gasoline are a little easier than a week ago and some 58-60 U. S. Motor was available today at 14½ cents and 58-60 with an initial boiling point and end point higher than Motor at 14¼ cents. In part of the Pennsylvania field the price of motor was still up to 15 cents. For 60-62 prices ranged from 15 to 15½ cents with some low end point goods of this gravity being held at 16 cents.

Kerosene seemed to be holding up fairly well at higher prices for the 45 and 46 gravity grades. Fuel oil was stronger, and opinion was general that the fuel market will continue strong unless a settlement is reached in the hard coal controversy.

The viscous neutrals are spotty. One of the larger makers said he was sold up and was forced to buy to supply his trade. He said he had found a scarcity of supplies meeting his specifications as to cold test. Goods of higher cold test, 30° or higher, seem more plentiful and may be bought for less than neutrals having a cold test of 20 to 25° F.

Steam refined stocks have been slow with prices of 600 fire slipping down but high fire test goods remaining fairly steady. Filtered and bright stocks have been steady.

Paraffin wax is strong with demand more active.

Kentucky

Price today at central Kentucky refineries were: 58-60 gasoline, 14 cents; 60-62 15; 64-66 16½; 42-44 water white kerosene 6½; 34-38 gas oil 5¼, and 24-26 fuel oil 4¼. Price of fuel oil is ¼ cent higher.

Gulf Coastal Lubricant Prices Reduced

HOUSTON, Aug. 8.—Further adjustments were made last week in Gulf Coastal lubricant prices, reflecting the crude reduction of 25 cents per barrel on Aug. 3. Except on contracts, 1 cent per gallon reduction usually made when price of crude is reduced 25 cents per barrel, was not made immediately on all lubricants, but prices had been revised on all grades by the end of the week.

Jobbers are inquiring for winter requirements more now than they were doing in July, with the prospect that September business will be even more active.

Tank Wagon, Service Station Markets for Gasoline and Kerosene In United States Territories and Canada

BELOW are given in cents a gallon, the tank wagon price of gasoline without the special taxes levied against motor fuels by many states, the amount of the state taxes, the total tank wagon price, with tax added in and the service station or retail price of gasoline as quoted by the Standard Oil Companies in their various marketing territories. The right hand column is the tank wagon price of kerosene. By tank wagon price is meant the price to resale agents or dealers.

These Prices in Effect August 10, 1925

S. O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Atlantic City, N. J.	18	0	18	*	12.5
Newark, N. J.	18	0	18	20	12.5
Annapolis, Md.	19	2	21	*	12
Baltimore, Md.	18	2	20	22	11
Cumberland, Md.	19	2	21	23	12
Washington, D. C.	18	2	20	22	12
Danville, Va.	19	3	22	*	13
Norfolk, Va.	19	3	22	24	13
Richmond, Va.	19	3	22	24	13
Roanoke, Va.	19	3	22	24	13
Petersburg Va.	19	3	22	*	13
Charleston, W. Va.	18	3.5	21.5	23.5	13
Clarksburg, W. Va.	19	3.5	22.5	24.5	13
Keyser, W. Va.	19	3.5	22.5	*	13
Parkersburg, W. Va.	18	3.5	21.5	23.5	13
Wheeling, W. Va.	18	3.5	21.5	23.5	13
Williamsburg, W. Va.	19	3.5	22.5	*	13
Charlotte, N. C.	19	4	23	25	14
Hickory, N. C.	19	4	23	*	14
High Point, N. C.	19	4	23	*	14
Mt. Airy, N. C.	19	4	23	*	14
Salisbury, N. C.	19	4	23	*	14
Charleston, S. C.	19.5	5	24.5	26.5	14.5
Columbia, S. C.	19.5	5	24.5	26.5	14.5

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

*New York City	20	0	20	24	13
Albany, N. Y.	†20	0	†20	†22	13
Buffalo, N. Y.	20	0	20	23	13
Rochester, N. Y.	†20	0	†20	†24	13
Syracuse, N. Y.	20	0	20	22	12
Boston, Mass.	22	0	22	24	11
Augusta, Me.	20	3	23	26	13
Manchester, N. H.	20	2	22	26	13
Burlington, Vt.	20	2	22	25.5	13

*In steel barrels.
†At Rochester and Albany, Standard sells two grades of gasoline, the above price applying to its Socony grade, and another grade being sold 2c below this price.

ATLANTIC REFINING

Pittsburgh, Pa.	20	0	20	*25	14
Philadelphia, Pa.	20	0	20	*25	14
Allentown, Pa.	20	0	20	*25	14
Erie, Pa.	20	0	20	*25	14
Scranton, Pa.	20	0	20	*25	14
Altoona, Pa.	20	0	20	*25	14
Dover, Del.	20	2	22	25	14
Wilmington, Del.	20	2	22	25	14
Providence, R. I.	22	1	23	27	13
Springfield, Mass.	21	0	21	24	13
Worcester, Mass.	22	0	22	26	13
Hartford, Conn.	21	1	22	26	12
New Haven, Conn.	22	1	23	27	13
Boston, Mass.	22	0	22	24	12

*Contains 2-cent tax collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	18	3	21	24	14
Louisville, Ky.	19	3	22	25	12
Covington, Ky.	18	3	21	24	14
Clarksdale, Miss.	19	3	22	25	12
Jackson, Miss.	19	3	22	25	9
Natchez, Miss.	18.5	3	21.5	24.5	11.5
Vicksburg, Miss.	18.5	3	21.5	24.5	11.5
Birmingham, Ala.	20	2	22	25	14.5
Mobile, Ala.	19	2	21	24	11
Montgomery, Ala*	21	2	23	26	15.5
Atlanta, Ga.	21	3	24	27	13
Augusta, Ga.	21	3	24	27	15
Macon, Ga.	21	3	24	27	13.5
Savannah, Ga.	19	3	22	25	13
Jacksonville, Fla.	19	4	23	26	13
Miami, Fla.	21	4	25	28	14.5
Tampa, Fla.	19	4	23	26	13
Pensacola, Fla.	19	4	23	26	13.5

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

S. O. INDIANA

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Chicago, Ill.	†19	0	†19	21	12
Decatur, Ill.	15	0	15	17	12.5
E. St. Louis, Ill.	18.1	0	18.1	20.35	11.6
Joliet, Ill.	19.4	0	19.4	21.4	12.7
Peoria, Ill.	19.2	0	19.2	21.2	12.5
Quincy, Ill.	19.2	0	19.2	21.2	12.5
Indianapolis, Ind.	19.2	3	22.2	24.2	12.7
Evansville, Ind.	19	3	22	24	12.5
South Bend Ind.	19.4	3	22.4	24.4	12.9
Detroit, Mich.	19.8	2	21.8	23.8	13.2
Grand Rapids, Mich.	19.7	2	21.7	23.7	13.1
Saginaw, Mich.	19.9	2	21.9	23.9	13.3
Madison, Wis.	19.3	2	21.3	23.3	12.5
Milwaukee, Wis.	19.1	2	21.1	23.1	12.3
La Crosse, Wis.	20.2	2	22.2	24.2	13.4
Minneapolis, Minn.	20.2	2	22.2	24.2	13.6
Duluth, Minn.	20.5	2	22.5	24.5	13.6
Mankato, Minn.	20.1	2	22.1	24.1	13.4
Des Moines, Iowa.	19.5	2	21.5	23.5	12.9
Davenport, Iowa.	19.5	2	21.5	23.5	12.9
Sioux City, Iowa.	19	2	21	23	12.5
Mason City, Ia.	19.5	2	21.5	23.5	12.9
St. Louis, Mo.	**18.6	2	20.6	22.9	12
Kansas City, Mo.	††19.9	2	21.9	23.9	11.3
St. Joseph, Mo.	**19	2	21	23	11.9
Fargo, N. D.	20.9	1	21.9	23.9	15.6
Grand Forks, N. D.	21.1	1	22.1	24.1	15.9
Minot, N. D.	21.9	1	22.9	24.9	15.6
Pierre, S. D.	21	3	24	*	14.1
Huron, S. D.	19	3	22	24	14.1
Wichita, Kans.	18.8	2	20.8	22.8	11.8
Bartlesville, Okla.	17.9	3	20.9	22.9	10.9

†Dumps of 100 or more gallons at 18c per gallon.
*S. O. Indiana does not operate station.
**Includes city tax of ½c.
††Includes city tax of 1c.

S. O. NEBRASKA

Crawford, Neb.	20	2	22	*	13.25
Omaha, Neb.	19.25	2	21.25	21.5	12.5
McCook	20.75	2	22.75	24.75	14
Norfolk	19.75	2	21.75	23.75	13
North Platte	20.75	2	22.75	24.75	13.75
Scotts Bluff	20.25	2	22.25	24.25	13.25

*Standard has no service station here.

CONTINENTAL OIL

Denver, Colo.	20	2	22	24	14.5
Pueblo, Colo.	20	2	22	24	14.5
Casper, Wyo.	20	2½	22.5	24.5	13
Cheyenne, Wyo.	21.5	2½	24	26	14.5
Butte, Mont.	22	2	24	24	16
Helena, Mont.	24	2	26	28	17
Salt Lake City, Utah.	21.5	3½	25	27	18
Boise, Ida.	21.5	3	24.5	26.5	20
Albuquerque, N. M.	23.5	3	26.5	29.5	16.5

S. O. CALIFORNIA

Phoenix, Ariz.	20	3	23	26	21.5
Los Angeles, Cal.	13.5	2	15.5	18.5	15.5
Fresno, Cal.	15.5	2	17.5	20.5	17.5
San Francisco, Cal.	15	2	17	20	15.5
Reno, Nev.	18.5	4	22.5	25.5	19
Portland, Ore.	15	3	18	21	16.5
Seattle, Wash.	15	2	17	20	16.5
Spokane, Wash.	19	2	21	24	20.5
Tacoma, Wash.	15	2	17	20	16.5

S. O. LOUISIANA

Camden, Ark.	18	4	22	24	11
Little Rock, Ark.	18	4	22	24	10
West Helena, Ark.	18	4	22	24	11
Alexandria, La.	16.5	2	18.5	19.5	11
Baton Rouge, La.	16	2	18	20	9.5
Lake Charles, La.	17.5	2	19.5	21.5	11
New Orleans, La.	*15.5	2	17.5	19.5	10
Shreveport, La.	17.5	2	19.5	21.5	11
Lafayette, La.	17	2	19	21	10.5
Bristol, Tenn.	16	3	19	21	12.5
Chattanooga, Tenn.	18.5	3	21.5	23.5	12.5
Knoxville, Tenn.	19.5	3	22.5	24.5	13
Nashville, Tenn.	16.5	3	19.5	21.5	12.5
Memphis, Tenn.	15	3	18	20	12

*Includes 1c city tax on gasoline and kerosene.

S. O. OHIO

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W
All Ohio points	18.5	2	20.5	22.5	13

MAGNOLIA PETROLEUM

Muskogee, Okla.	16	3	19	22	11
Oklahoma City	15.6	3	18.6	21.6	12
Tulsa, Okla.	16	3	19	22	11
Fort Smith, Ark.	18	4	22	25	12
Little Rock, Ark.	18	4	22	24	10
Texarkana, Ark.	18	4	22	25	12
Dallas, Tex.	18	1	19	23	12
El Paso, Tex.	19	1	20	23	13
Fort Worth, Tex.	16	1	17	20	10
Houston, Tex.	18	1	19	23	12
San Antonio, Tex.	18	1	19	22	12

*Within city of Texarkana, Ark., the state tax on gasoline is 1c per gal. conforming with the Texas state tax. In Texarkana district outside of the city the 4c state tax applies.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline)

	Oleum Spirits	V.M.&P. Naphtha	Cleaners Naphtha
Chicago	20	22	23
Detroit	21.2	23.7	23.7
Kansas City	20.2	22.2	25.2
Milwaukee	20.2	24.7*	24.7*
Minneapolis	21.5	26*	26*
St. Louis	19.4	21.9	23.2

*Including state tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

Prices in effect Aug. 10, 1925

ONTARIO

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Toronto	24.5	3	27.5	31	20
Ottawa	25.5	3	28.5	32	21
Cochrane	29.5	3	32.5	40	24.5
Ft. William	27.5	3	30.5	34	22.5
MANITOBA					
Winnipeg	27.5	3	30.5	34	22.5
SASKATCHEWAN					
Regina	30.5	0	30.5	34	25.5
ALBERTA					
Edmonton	32.5	2	34.5	38	27.5
Calgary	31.5	2	33.5	37	26.5
BRITISH COLUMBIA					
Vancouver	21	3	24	28	23
QUEBEC					
Montreal	24.5	3	27.5	31	20
Quebec City	25.5	3	28.5	32	22
NEW BRUNSWICK					
St. John	27.5	0	27.5	31	23
Moncton	27.5	0	27.5	31	23
NOVA SCOTIA					
Halifax	27.5	0	27.5	32	23
Sydney	29.5	0	29.5	38	23
PRINCE EDWARD ISLAND					
Charlottetown	27.5	2	29.5	34	23

Note: In districts surrounding these points 1c additional is added to city price.

Complete Export Markets

New York Gulf Coast California

Gasoline, Bunker and Gas Oil, Lubes Weak in New York

NEW YORK, Aug. 10
By Special Correspondent

BULK gasoline continued downward last week, and on Friday. It was persistently rumored that U. S. Motor gasoline could have been had at 13¼ cents and possibly 13 cents a gallon, on a firm bid. Export demand has been light in the last few weeks. Domestic jobbers are buying hand-to-mouth.

Saturday, Aug. 8 the Standard Oil Co. of New Jersey reduced all grades of export gasoline and naphtha 1 cent a gallon. This company also reduced gasoline tank wagon prices 1 cent a gallon throughout its territory.

Big European buyers are following the market more closely. One United Kingdom buyer was inquiring for 56,000 barrels of U. S. Motor and 64-66 gravity gasoline and prime and water white kerosene, but appeared disinterested at prevailing prices. Buyers point to the nearness of fall and heavy stocks, and feel that prices are bound to fall soon.

Refiners appear more anxious to press sales at slight concessions, but nevertheless find it difficult to interest foreign buyers.

Cased gasoline has been moving steadily on consignment and contract, but little fresh buying was recorded last week. There was an inquiry from South America for 25,000 cases of Motor gasoline and another from the West Coast of Africa for 20,000 cases but no sales were made. Levant buyers also are holding off.

Kerosene Inquiries Increase

Kerosene demand is expected to increase soon. Domestic buyers are inquiring for larger quantities. Water white was available at 6¼ cents at one refinery but the prevailing price was 6¾ cents at refinery. Stocks are fair. There was an inquiry for 35,000 barrels of prime and water for late August shipment to Europe presumably to Scandinavia but this is still pending.

Cased kerosene was flat, the movement continuing mainly against contracts. An inquiry for 35,000 cases for August-September shipment to the Levant remained unfilled. South American buyers are showing little interest. A Chinese concern has been inquiring for 30,000 cases and one of the large Independents expects to close this soon.

Lubricating oils showed a declining tendency. Pennsylvania 600 steam refined in barrels, New York, was held at 25 cents but 24 cents could have been done in several directions on a bid. Export demand for this oil has slackened and orders, chiefly from England and France, have been confined to 200 to 400 barrels each for prompt shipment. Praffin oils are flat while little interest is shown in the black oils. Spindle oils are moving a trifle more freely.

Bunker oil is weak. Leading factors are asking $1.75 a barrel, but persistent reports are current that business is being booked at $1.70 with indications that even this price can be shaded on a firm bid. Diesel oil was reduced 20 cents a barrel at the beginning of the week by the Standard Oil Co. of New Jersey. The price now ranges from $2.10 to $2.30 a barrel, f.o.b. New York harbor refinery. Demand for this oil is light.

Gas oil prices were weak, but 36-40 was held at 5½ cents and 28-34 at 5¼ cents, the same as the week before. Stocks are large and a price cut is expected shortly. No export buying of consequence has been reported in several weeks. European buyers are apparently finding it cheaper to use Galician oil.

The waxes were strong. Weakness in major petroleum products has not yet affected this market, and 122-124 A.m.p. was in good demand at 5½ cents a pound. United Kingdom and Spanish buyers are operating more freely. One broker reported the sale of 150 tons of white crude scale at 5½ cents in the last 10 days. Fully refined grades are moving freely, and offered a little more sparingly.

Medicinal oils are quiet but slightly steadier. Stocks are slightly in excess of current requirements but there is a better inquiry for future delivery. The movement in petrolatums has been disappointing and snow white is freely offered at 10 cents and lily white at 8 cents. Export demand is lagging.

Gulf Export Market is Quiet; Only Wax is Strong

By Special Correspondent

NEW ORLEANS, Aug. 10. — Export buyers showed a keener interest in the domestic market last week, and as there was keen competition for business, gasoline price fell at least ½ cent a gallon during the week. A large French buyer purchased a 56,000-barrel mixed cargo. Prices were reported as 12¾ cents for Motor gasoline, 15¾ cents for 64-66 gravity gasoline, 5 cents for prime white and 6 cents for water white kerosene. However, in one reliable source it was stated the Motor was sold at a trifle below 12¾ cents.

French buyers alone appeared interested in bulk goods. The first inquiry for September shipment was received from a French concern and called for 48,000 barrels of gasoline and kerosene, while two similar inquiries were received from French houses for late August clearing from the Gulf. Observers look for further declines before these deals are closed, in view of the unusually keen competition.

Most foreign buyers look for a break in gasoline and are reticent to purchase beyond late August shipment, regardless of the fact that stocks abroad are low as a result of hand-to-mouth buying.

Cased goods changed little. Motor was offered in cargo lots at $2.55 while 64-66 gravity could have been had at $2.80 and possibly a trifle lower on a firm bid. There was an inquiry from China for 35,000 cases of Motor and 64-66 gravity but this deal has not been closed. An inquiry was also received from Japan for 25,000 cases which one of the leading Independents expects to book shortly. Australian buyers were not much interested in the market last week. However, there was a good movement to Australia against contracts.

Kerosene is Quiet

Bulk kerosene was quiet. Prime white was quoted at 5¼ to 5½ cents and water at 6¼ to 6½ cents early in the week, but most

N. Y. Domestic Market

The following light oil, gas and fuel oil prices are F. O. B. New York refineries, being products made rom Domestic (including California) and Mexican Crudes.

	Aug. 10	Aug. 3
U. S. Motor Gasoline, Tank Cars Delivered	-14¼	-15¼
U. S. Motor Gasoline, Tank Cars Bayonne	-13¼	-14¼
Kerosene, 45-150 W. W. Tank, Cars Del'd	-.07½	-.07¾
*Grade C Bunker, f.o.b. N.Y.	1.75	1.75
Diesel Oil f.o.b. Refinery	2.10	2.30
Gas Oil, 36-40, Bulk, Refinery	-05¼	-05¼
Gas Oil, 28-34	-05¼	-05¼
Furnace Oil, 38-42 Ref.		-05¼

*nominal

of the refiners would have done 5 and 6 cents toward the end. Most of the refiners feel fairly confident of the future, in view of the limited export buying during the past few weeks. It is generally believed that stocks abroad must be small and with the heavy consuming season approaching buying should show a good sized increase.

Cased kerosene prices are steady at $1.60 for prime white and $1.70 for water white. No sizable cased kerosene sales have been uncovered in some time. There was an inquiry for 30,000 cases for August-September shipment to the Levant but this failed to materialize. A Japanese buyer was inquiring for 15,000 cases of water white but this was also hanging fire although a big Independent expects to close it early this week.

The tendency in gas oil was easier but no actual reductions took place. For 32 plus dark oil the asking price was 4⅝ cents a gallon while 26-28 gravity transparent was held at 4⅞ cents with indications that either of these prices could have been shaded at least ⅛ cent a gallon on a firm bid. There was an inquiry from Germany for 28,000 barrels, but this failed to materialize.

Bunker Oil Softer

Bunker oil was appreciably softer. Leading refiners were asking $1.50 a barrel for oil for bunkering purposes but for cargo oil $1.45 could have been done. No cargo sales were recorded. At Tampico grade C was quoted at $1.50 a barrel while heavy Panuco crude was held at $1.20, taxes to be added.

New York Export Market

Prices below are averages of actual sales by local exporting agencies

GASOLINE	Aug. 10	Aug. 3
U. S. Motor, Bulk, Ref. 13	-13¼	-14¼
KEROSENE		
45-150 W. W. Bulk Ref.	-06¼	-06¾
GAS OIL		
36-40, Bulk Ref.	-05⅝	-05⅝
28-34, Bulk Ref.	-05¼	-05¼
BUNKER OIL		
Grade C, Ref.	1.75	-1.75
Diesel Oil Ref.	2.10	-2.30

LUBRICATING OILS

The following prices are cooperage basis f. o. b. New York, products being manufactured by inland refineries.

CYLINDER OILS BBLS.		
Penna. Filtered D 600	-34	-34
Penna. Filtered E 600	-30	-30
Unfiltered 600 s. r.	-24	-24
Unfiltered 650 s. r.	29½	-32
600 flash s. r.	-33	-35
Western 600 s. r.	-15½	-14½
Bloomless 30-31 grav.	-21	-24
RED PARAFFIN (bbls.)		
300 vis. at 100°F.	-22	-22
250 vis. at 100°F.	-20	-21
High Viscosity Paraffin	-26	-27
.885 s. g. pale 100 vis. at 100°F	-15	-15
SPINDLE (bbls.)		
200 vis. at 100°F. Pale	-28	-29
180 Pale	-26	-27
150 Pale	-24	-25
BLACK OIL (bbls.)		
25-30 cold test 14	-15 14	-15
15 cold test 15	-15½ 15	-15½

MEDICINAL OILS (Cooperage Basis) (Penna. Stocks)	Aug. 10	Aug. 3
Domestic.875-.885s.g.drums	1.00-1.08	1.00-1.08
Domestic.865-.870s.g.drums	75 -80	75- 80
Russian.885-.890s.g.325-330 vis. drums	1.20-1.25	1.20-1.25
WAXES (Penna. Stocks) (F. A. S. Carload Lots)		
WHITE CRUDE SCALE		
122-124 A. m. p.	-05½	-05½
124-126 A. m. p.	-05½	-05½
MATCH		
105-108 A. m. p.	-06	-06
111-115 A. m. p.	nominal	nominal
FULLY REFINED		
120-122 A. m. p.	-06	-06
123-125 A. m. p.	-06	-06
125-127 A. m. p.	-06¼	-06¼
128-130 A. m. p.	-06¾	-06¾
130-132 A. m. p.	-06¾	-06½
133-135 A. m. p.	-06¾	-07
135-137 A. m. p.		-07¼
SEMI REFINED		
122-124 A. m. p.	-05¾	-05¾
YELLOW CRUDE SCALE		
124-126 A. m. p. 05¼	-05¾	-05¾
PETROLATUMS (Penna. Stocks)		
Dark Green	02½	02½
Veterinary	03	03
Light Amber	03¼	03¼
Dark Amber	03	03
Cream	06	06
Lily White	08	08
Snow White	10	10

EXPORTERS

of

PETROLEUM
PRODUCTS
FROM
GULF PORTS

CRUDE OIL
FUEL OIL
GAS OIL
GASOLINE
DIESEL OIL
KEROSENE
LUBRICATING OILS

Bulk and Package Shipments

ROTHERMEL & CO.
907 Keystone Bldg—Houston, Tex.

Cable Address: Rothoil Houstontex

N. Y. Export Quotations

Furnished by big exporting oil companies. No actual sales. Record for statistical purposes only.

Illuminating Oils
Standard Oil of New Jersey

	Aug. 10	Aug. 3
Bulk, gal., Bayonne	6.00	6.00
Barrels, gal., Bayonne, cargo	13.00	13.00
Cases, gal., Bayonne	16.50	16.50

Prices for water white oil (150 test) are 1 cent higher than those for standard white.

Gasoline-Naphtha
(Cents per Gallon)

U. S. Motor, dead bulk	15.50	16.50
U. S. Motor, cases	29.65	30.65
Export Naphtha bulk	18.25	19.25
*62-63 deg. bulk	19.50	20.50
66-68 deg. bulk	21.00	22.00

*Grade changed from 64-66 to 62-63 Jan. 9.

Tide Water Oil Company
(f. o. b. Bayonne)

58-59 deg. bulk	16.50	17.50
58-59 deg. cases	30.15	31.15
Export grade, U. S. Motor Specifications bulk	15.50	16.50
68-72 deg. bulk	22.00	23.00

	Bulk	Barrels	Cases
Standard white 110	6.00	13.00	16.00
Water white 150	7.00	14.00	17.00

The Texas Company

Gasoline, cases	29.65	30.65

Kerosene	Bulk	Barrels	Cases
Standard White	6.00	13.00	16.40
Prime White	6.50	13.50	16.90
Water White	7.00	14.00	17.40

Gulf Export Market

(Actual Sales Prices)
Gasoline

	Aug. 10	Aug. 3
U. S. Motor, Bulk	-.12¾ .13¼	-.13¼
60-62 gr. 400 c. p.	-.14¼ .15¼	-.15¼
64-66, Bulk	-.15¾ .16¾	-.16¾
U. S. Motor, Cases (cargo lots)	2.50	2.65
64-66, Cases (cargo lots)	2.80	2.90
KEROSENE		
Water White, bulk .06	-.06¼	-.06¼
Prime White, bulk .05	-.05⅛	-.05¼
Water White, cases (cargo lots)	1.70	1.70
Prime White, cases (cargo lots)	1.60	1.60
GAS AND BUNKER OIL		
26-28, gravity, bulk 04¼		-04¾
32 plus, bulk, Dark 04⅝		-04⅝
Grade C, Bunker oil 1.45-1.50		-1.50
MEXICAN CRUDE AND BUNKER OILS		
Heavy, f.o.b. Tampico, Taxes to be added	1.20	nominal
Mexican Grade C, Bunker oil F. O. B. Tampico Taxes paid	1.50	1.50
Mexican C, Bunker oil New Orleans	1.50	1.50

Lubricating Oils

SOUTH TEXAS
(Viscosity at 100°F; cold test 0)
(Tanker, F. O. B. Houston)

	Aug. 10	Aug. 3
100 Vis. No. 2 Unfiltered Pale	08	08
150 Vis. No. 2½ Unfiltered Pale	10½	10½
200 Vis. No. 3 Unfiltered Pale	11½	11½
300 Vis. No. 3 Unfiltered Pale	14	14
500 Vis. No. 3½ Unfiltered Pale	16	16
200 Vis. No. 5½ Red Oil	10½	10½
300 Vis. No. 5½ Red Oil	12½	12½
500 Vis. No. 6 Red Oil	14½	14½
800 Vis. No. 6 Red Oil	20½	20½

Pacific Export Market

(Cargo lots quotations at seaboard, Los Angeles)

	Aug. 8	Aug. 1
Gasoline, U. S. Motor—54°—56°	10½–11½	10½–11½
Gasoline—U. S. Motor blends and special cuts	11½–12½	11 –12½
Gas Oil, 24°—30°B per bbl.	$1.75	$1.75
Diesel Oil, 27°B—plus per bbl.	$1.75	$1.75
Bunker Oil, 14°—18°B per bbl.	$1.50	$1.50
Fuel Oil, 14°—18°B per bbl.	$1.50	$1.50
Kerosene, W. W. 40°—42° B per gal., 125-150 flash test	05 –06½	05 –06½
Cased Goods		
Gasoline, U. S. Motor	$2.70	$2.70
Kerosene, W. W. 40°—42° B per case, flash test 125-150	$1.55–1.65	$1.55–1.65

British Importations

During the week ended July 13, 36,191,864 imperial gallons of petroleum and products were imported into the United Kingdom. Larger receipts were:

Consignee	Imperial Gallons	Product	Port of Origin
At London—			
Medway Oil	274,970	Gasoline	Wilhelmin
Medway Oil	2,188,800	Kerosene	Batown
Natl. Benzol	2,747,986	Gasoline	Los Angeles
Shell	172,905	Benzine	San Pedro
Shell	596,256	Fuel Oil	Curacao
Shell	247,554	Fuel Oil	Curacao
Shell	865,260	Lubes	Curacao
Lubricating and Fuel Oils	984,250	Gasoline	Philadelphia
Brit. Pet.	2,167,480	Kerosene	Abadan
Anglo Amer.	2,725,820	Gasoline	Novorosik
Anglo Mex.	113,045	Kerosene	Tampico
United Caucasion.	420,000	Kerosene	Beaumont
At Barrow—			
Anglo Amer.	238,100	Kerosene	Atreco
At Hull—			
Shell	741,722	Gasoline	Curaco
Anglo Mex.	1,506,500	Gasoline	San Pedro
Anglo Amer.	1,347,920	Kersoene	Avondale
At Machester—			
Anglo Amer.	2,248,160	Gasoline	Martinez
At Southampton—			
Brit. Mex.	1,999,839	Fuel Oil	Destieham
Brit. Mex.	1,737,481	Fuel Oil	Novorosik
Shell	1,154,640	Fuel Oil	Curacao
Shell	153,005	Benzine	Rangoon
Shell	1,032,388	Benzine	Sabang
At Glasgow—			
Brit. Mex.	1,398,000	Fuel Oil	Batoun
At Grangemouth—			
Scottish Oils	2,360,450	Crude	Abadan
At Granton—			
A. MacIntosh & Co.	642,600	Gasoline	San Pedro

Cargoes Clearing From N. Y.

Date	Destination	Product	Quantity
July 22	Antwerp	Lubes	2,228bbls.
July 14	Santos, Brazil	Lubes	2,265cs
July 16	Cape Haiti	Ref. Pet.	1,000cs.
July 16	Jacmel, Haiti	Kerosene	500cs.
July 16	Port au Paix (Haiti)	Kerosene	500cs.
July 16	St. Marc, Haiti	Kerosene	500cs.
July 20	Casablanca	Lubes	886bbls.
July 20	Casablanca	Naphtha	7,000cs.
July 20	Casablanca	Ref. Pet.	1,774cs.
July 20	Tangiers, Morocco	Naphtha	1,000cs.
July 17	Puerto Plata (Argentina)	Gasoline	15,350cs.
July 17	Puerto Plata	Kerosene	10,010cs.
July 17	Bahia Blanca (Argentine)	Gasoline	15,000cs.
July 17	Bahia Blanca	Kerosene	15,000cs.

OKMULGEE.—J. J. Moroney, well known and old time oil man of Okmulgee Oklahoma is in Europe for a four months' tour, visting the British Isles and all countries in the western part of the Continent.

Crude Oil Prices All Fields

ALL PRICES EFFECTIVE, *August 10*

EASTERN FIELDS
Posted by Joseph Seep Purchasing Agency

Penna. Grade Oil in New York Transit Lines (Allegany, N. Y. District)	$3.90	Gaines, Tioga Co. (Pa.)	$3.45
Bradford District Oil in National Transit Lines (Bradford District)	3.90	Cabell Grade in Eureka Pipe Lines (West Virginia)	2.35
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	3.80	Corning Grade in Buckeye Pipe Lines (Ohio)	2.25
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	3.80	*Somerset Medium in Cumberland Pipe Lines (Kentucky)	2.45
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	3.75	*Somerset Light in Cumberland Pipe Lines (Kentucky)	2.60
Penna. Grade Oil in Buckeye Pipe Lines (Ohio)	3.75	Ragland Grade in Cumberland Pipe Lines (Kentucky)	1.30

*Somerset oil run prior to Oct. 1, 1923, takes price of 6 cents lower than above quotations.

CENTRAL STATES FIELDS
Posted by Ohio Oil Co.

Wooster	$2.35	Indiana	$2.13	Plymouth	$1.65
Lima	2.33	Princeton	2.12	*Canadian Petrolia	2.75
		Illinois	2.12	*Posted by Imperial Oil, Ltd.	

OKLAHOMA, KANSAS And NORTH TEXAS FIELDS
(Prices of Prairie Oil & Gas Co. and Humble Oil & Refining Co.)

(Prairie's prices apply in Oklahoma, Kansas, North and Central Texas. Humble's prices apply on Ranger, North Texas, Moran, Mexia, Powell, Currie, Richland, Wortham and Lytton Springs, all of which were put on the same gravity and price schedule on **July 10** as other Mid-Continent and North Texas crudes posted by Prairie).

28-28.9	$1.40	34-34.9	$1.88	40-40.9	$2.36
29-29.9	1.48	35-35.9	1.96	41-41.9	2.44
30-30.9	1.56	36-36.9	2.04	42-42.9	2.52
31-31.9	1.64	37-37.9	2.12	43-43.9	2.60
32-32.9	1.72	38-38.9	2.20	44 and above	2.68
33-33.9	1.80	39-39.9	2.28		

The Texas Co. met the above gravity and price schedule on **July 10** in Oklahoma, North Texas, North Central and Central Texas including Mexia, Currie, Powell, Wortham and Richland.

Other important purchasers who have met the Prairie schedule include Sinclair, Marland, Mid-Continent Pet. Corp. (Cosden), Empire and Gulf.

Prices of Magnolia Petroleum Co.

OKLAHOMA, KANSAS, NORTH And NORTH CENTRAL TEXAS

Below 28 ..... $1.00 28-30.9 ..... $1.35

(Only the above two grades differ from Prairie's and Humble's schedules. Each grade from 31 degrees on takes same price as Prairie's and Humble's schedule. Magnolia's prices apply in all fields where it purchases in Oklahoma, Kansas, North and North Central Texas, including Mexia, Wortham, Corsicana and Lytton Springs, Texas, the latter four fields having been put on **July 13** on the same gravity basis as the other fields. Other fields in Oklahoma, Kansas and North Texas were graded in accordance with the Prairie schedule on **July 11.**)

NORTH LOUISIANA—ARKANSAS FIELDS
***Prices of the Standard Oil Co. of Louisiana**

Caddo, below 32	$1.85	Haynesville, below 33	$1.75	Smackover, 24-24.9	$1.15
do 32-34.9	2.00	do 33 and above	1.85	do 25-25.9	1.25
do 35-37.9	2.10	El Dorado, below 33	1.75	do 26-26.9	1.30
do 38 and above	2.20	do 33 and above	1.85	do 27 and above	1.35
Homer, below 31	1.60	Bull Bayou, 32-34.9	1.70	De Soto	2.05
do 31-32.9	1.75	do 35-37.9	1.85	Crichton	1.85
do 33-34.9	1.85	do 38 and above	2.00	Bellevue	1.65
do 35 and above	1.95	Smackover, below 24	.85	Cotton Valley	1.10

*Same prices maintained by The Texas Co. and Gulf Production Co. The Texas Co. buys in Caddo, Bull Bayou, De Soto, Crichton and Smackover fields.

STEPHENS, ARKANSAS
Posted by Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

26 and above ..... $1.55 Below 26 ..... $1.35

SMACKOVER, ARKANSAS
Prices of Louisiana Oil Refining Corp.

Below 23	$0.85	25-25.9	$1.25	27-27.9	$1.35
23-23.9	.95	26-26.9	1.30	28 and above	1.50
24-24.9	1.15				

SMACKOVER, ARKANSAS
Prices of Atlantic Oil Producing Co. and Shreveport-Eldorado Pipe Line Co.

Below 24	$0.90	25-25.9	$1.25	27-27.9	$1.35
24-24.9	1.15	26-26.9	1.30	28 and above	1.50

GULF COASTAL FIELDS
(Posted by Humble Oil & Refining Co., The Texas Co., Gulf Production Co., Sun Oil Co. and Sinclair Crude Oil Purchasing Co.)

Grades A ..... $1.50 Grades B $1.25

Goose Creek, Hull, Orange and Pierce Junction are the only Gulf Coastal fields that have A and B grade classifications. All other fields are classified as A grades only.

Humble buys Goose Creek, Hull, Orange, Pierce Junction and West Columbia, Texas.

Gulf buys Goose Creek, Hull, Sour Lake, Batson, Saratoga, Spindletop, Orange, Tex. and Vinton, Edgerley and Jennings, La.

Sun Oil Co. buys Humble, Hull, Goose Creek, Terry, Spindletop, Saratoga, Batson and Sour Lake, Texas.

Texas Co. buys West Columbia, Humble, Jennings, Markham, Orange, Sour Lake, Tex. and Vinton, La.

ROCKY MOUNTAIN FIELDS
Prices of Ohio Oil Co. and Midwest Refining Co.

†Salt Creek, Wyo.	$1.60	Lance Creek	$2.15	Sunburst, Mont.	$1.55
Elk Basin	2.15	Rock Creek	2.00	†Hogback, N. Mex.	2.20
Grass Creek, light	2.15	†Osage	2.15	Artesia, N. Mex.	1.70
Big Muddy	2.00	†Cat Creek, Mont.	2.15		

†Posted by Midwest Refining Co. Midwest also buys Grass Creek light, and Elk Basin.

The Texas Co. buys Salt Creek crude.

CALIFORNIA
Prices of Standard Oil Co. of California

14-19.9	$1.25	25-25.9	$1.44	30-30.9	$1.64
20-20.9	1.27	26-26.9	1.48	31-31.9	1.68
21-21.9	1.30	27-27.9	1.52	32-32.9	1.72
22-22.9	1.33	28-28.9	1.56	33-33.9	1.76
23-23.9	1.36	29-29.9	1.60	34-34.9	1.80
24-24.9	1.40			35 and above	1.85

ROSECRANS—ATHENS FIELD

36-36.9 ..... $1.92

and for each increase of one full degree above 36° gravity, up to and including 41.9° gravity, 8 cents per barrel additional.

42 and above $2.40

REFINERS' and COMPOUNDERS' SUPPLIES

Following are the average market prices for the week on materials used by refiners and compounders f. o. b. shipping point as effective this date.

Refiners' Supplies

	Aug. 10	Aug. 3
Soda Ash light 58% bags cwt.	-$1.38	-$1.38
Silicate of Soda 60 deg. drums.....cwt.	- 1.70	- 1.70
Sal Soda wks.....cwt.	1.10- 1.25	1.10- 1.25
Caustic Soda 70% solid. cwt.	- 3.10	- 3.10
Chloride of Lime.....cwt. works.....	- 1.90	- 1.90
Sulphuric Acid 60 deg. tank cars f. o. b. shipping point.....per ton	9.50-11.00	9.50-11.00

Compounders' Supplies (Open Market)

Vegetable Oils—

Linseed carloads spot....gal.	- 1.03	- .98
August.....	- 1.03	- .98
Tanks, spot.....	- .90	- .92
Less carload spot.....gal.	- .99	- 1.01
Less than 5 bbls. spot.....	- 1.01	- 1.03
Boiled tank spot.....	- .93	- .95
Boiled, carloads spot....gal.	- .99	- 1.01
*Soya Bean spot, Bbls....lb.	- .13	- .13

Animal Oils—

English Degras.....lb.	.05-.05¼	.05-.05¼
Domestic Degras, bbls., carloads.....lb.	-.04½	-.04½
*Horse.....lb.	-.09½	-.09½

Oleic Acid—

Dist Bbls.....lb.	-.11¼	-.11¼
Saponified, Bbls.....lb.	-.11	-.11

Lard Oils—

Prime		
Winter Strained. 1 to 1½ffa.40‡45c.t.lb.	.21	.20¾
Extra		
Winter Strained. 2 to 4½ffa.40/45c.t.lb.	.20¼	.19¾
Extra..... 4 to 5 ffa.40/45c.t.lb.	.15¾	.14¾
Extra No. 1 7 to 10 ffa.40/50c.t.lb.	.14¾	.14¾
No. 1.....15 to 18 ffa.40/45c.t.lb.	.13¾	.13¾
No. 2.....22 to 23 ffa.40/45c.t.lb.	.13¼	.12¾
Prime Edible Tallow under 1⅛ffa. 40/45c.t.N.Y.....lb.	-11¼	-.11¼
Tallow acidless.....lb.	-.13¾	-.14
Lard Stearine.....lb.	-.21	-.21
Oleo Stearine.....lb.	-.15	-.15

Neatsfoot Oil—

Pure.....bbls.-lb.	.15	.15
Extra.....do lb.	.14	.14
No. 1.....do lb.	.13¾	.13¾
Cold pressed.....lb.	.17½	.17½

Fish Oils—

Menhaden Oil		
Light pressed.....gal.	-.76-.78	76-.78
White.....gal.	-.81-.83	81-.83
Yellow bleached.....gal.	-.79-.81	79-.81
*Herring tank cars coast.....gal.	-.45	-.45
Whale, extra winter bleached.....gal.	-.79	-.79
Seal.....gal.		Nominal

Naval Stores—

Turpentine, N. Y.....gal.	.97	.96½
Turpentine†.....gal.	.90¾	.90½
Rosin, B. N. Y.....Bbl.	10.25	10.00
Rosin, F. N. Y.....Bbl.	10.25	10.10
Rosin, B†.....Bbl.	9.10	8.75
Rosin, F†.....Bbl.	9.15	8.85
Rosin Oil 1st run.....gal.	.56	.56
Rosin Oil 2nd run.....gal.	.59	.59

Pine Tar—

Kiln Burnt.....Bbl.	14.00	14.00
Retort.....Bbl.	15.00	15.00

†Savannah, Ga. market.
*Nominal.

Sulfuric Acid Market Active and Strong

By Special Correspondent

NEW YORK, Aug. 10.—Conditions in the markets for oils and supplies used in compounding and refining last week were:

Linseed Oil.—Prices higher. Spot oil now $1.03 a gallon in carlots, cooperage basis, reflecting the strength in flaxseed. Demand still light. Buyers skeptical of the advance. Boiled oil flat. Varnish type in better demand. Soya bean oil quiet at 13 cents, barrel, in New York.

Fish Oils.—Quiet. Crude menhaden more plentiful. Demand spasmodic. Light pressed menhaden in slightly better demand. White bleached marking time. Yellow dull. Domestic cod oil moving more freely at 61 cents a gallon, cooperage basis.

Animal Oils.—Stronger. Prime lard advanced ½ cent. Now 21 cents a pound. Export demand more active. Little interest in neatsfoot oils. Prices steady. Tallow oils moving more freely. Domestic degras flat. Stearine steady. Oleo held at 15 cents.

Caustic Soda.—Demand light. Large movement against contracts keeping prices firm. Stocks moderate. Buyers uninterested in futures. Export buying spasmodic.

Soda Ash.—Steady. Export inquiry better but demand lagging. Stocks moderate.

Sulfuric Acid.—Strong. Demand active. Spot stocks light. Limited offerings for nearby deliveries.

Bleaching Powder.—Dull. Business light, and routine. Stocks large. Prices unchanged. Export interest negligible.

Naval Stores.—Steady. Price fluctuations in turpentine very narrow. Demand fair. Stocks moderate. More interest in rosins. Prices shade firmer. Southern markets quiet. Rosin oils in better demand. Prices steady. Tar and pitch in routine demand.

Spot Benzol is Scarce

NEW YORK, Aug. 10.—The motor benzol market changed little last week. There is an acute shortage of spot supplies and the price is nominal at 25 cents a gallon in tanks at ovens, with virtually nothing available. Production is about 70 per cent of normal but consumption is heavier than usual. Although producers expect a good increase in the output over the next 30 days it is doubtful if prices will come down or the supply situation will show any improvement until fall.

There is a heavy movement direct into consuming channels, and practically nothing is in the hands of jobbers or resellers at present. Export inquiries are more numerous but producers are unable to take care of the foreign demands at present. Most big motor fuel blenders in this region are well covered on contracts but there are a few who are scouring the market for supplies.

NORTH BRANCH, MINN. — The North Branch Oil Co., this city, has completed a service station on highway No. 1 which connects Duluth and Minneapolis.

A one pound can of cup grease was given away on the opening day, Aug. 1, with each five-gallon purchase of gasoline. Tickets giving "chances" on 50 gallons of gasoline, or on a five gallon can of Tiolene motor oil, were also given away on the opening day.

MECHANICSBURG, O.—Stewart and Stockwell are completing a bulk and service station here.

Financial Notes

Lion Oil Refining Co.—Earnings after expenses but before reserves for taxes and taxes for first half of 1925 was $1,344,018 as compared with $816,873 in first half of 1924.

Sun Oil Co.—Net profits for six months ended June 31 after depreciation, depletion, federal taxes and other charges was $2,529,001 or $2.39 a share on the outstanding 1,057,159 shares of no par capital stock.

Cities Service Co. in the 12 months ended June 30 netted $15,436,501 as compared with $14,282,120 in the 12 months ended June 30, 1924. Earnings this year after dividends on the preferred stock were 14.04 per cent on the average amount of common stock outstanding.

Marland Oil Co.—$20,000,000 2-year notes due Nov. 1, 1926, will be called for redemption on Nov. 1, 1925, at 101 and accrued interest. This will leave the company free of funded debt with exception of $517,000 equipment trust certificates.

Chesebrough Mfg. Co.—Stockholders vote to retire on Sept. 13 the outstanding 10,000 shares of 7 per cent cumulative preferred stock at 112½ and the quarterly dividend of $1.75 due at that time. Par value of stock is $100.

California Gallonage Grows

LOS ANGELES, Aug. 7.—Domestic demand for gasoline in California was 18,000,000 gallons larger in the second quarter of 1925 than in the first quarter, state tax receipts show. The taxable gallonage during the first quarter was 172,449,869 and that of the second quarter 190,362,553. Indications point to larger consumption during the third quarter than during the second quarter.

Stabilized Markets Help Associated And Pacific

CLEVELAND, Aug. 6

STABLIZED markets in California last year with prices slightly higher than in 1923 are reflected in better reports of earnings by the Pacific Oil Co. and its affiliated company, the Associated Oil Co., as in the cases of other major companies of the Pacific coast and whose operations have been reviewed previously in these pages.

Earnings of the Pacific Oil Co. were $3.40 a share on the 3,500,000 shares of no par common stock as compared with $2.55 a share in 1923, and $3.37 a share in 1922. The Associated in which the Pacific has a 54.9 per cent interest, earned $2.85 a share as against $2.65 a share in 1923 and $10.54 a share in 1922.

In order to make payment with light crude to the Associated for fuel oil delivered to it in 1923, the Pacific last year was forced to reopen shut in wells and thereby increased its production 5,965,762 barrels to 15,570,353 barrels. Its production was divided among the various fields as follows:

	1924	1923
Coalinga	2,024,991	760,723
Kern River	400,214	386,306
McKittrick	348,758	366,149
Southern California	187,494	.....
Sunset	12,573,179	8,091,413
Texas	35,717	.....
Total	**15,570,353**	**9,604,591**

The Pacific's fuel oil sales last year amounted to 16,073,255 barrels, as compared with 19,506,506 barrels in 1923. The decrease was caused by the lessened demand of the Southern Pacific railroad. The company also sold 100,000 barrels of tops.

On Dec. 31 the company had in storage, including the half interest in the holdings of the Associated Supply Co. and oil due from other companies in exchange for light crude, 3,689,042 barrels of oil, as compared with 4,014,087 barrels at the end of 1923.

During last year the Pacific, equally with the Associated, acquired an interest in the Hughes Oil Co. of Texas consisting chiefly of royalty interests in 36,150 acres of proven and prospective oil lands in Texas. Properties of the Black Panther Oil Co. in Webb county, Texas, also were acquired. Additional leases were acquired in southern California.

The Pacific had operating at the end of the year 927 wells in the San Joaquin

(Continued on next page)

Cleveland Stocks

	Par	Aug. 7 Bid	Asked	Last Sale
Canfield Oil Co...	$100	110	.....	115
do pfd.....	100	.....	.....	95
Fred G. Clark Co.	10	2⅛	2¾	2⅛
National Refin. Co	25	x38	38½	38
do pfd.....	100	130	135	128
Paragon Refin. Co.	25	8⅝	9¼	9¼
do pfd.....	100	72½	75	75

x Ex-dividend

Consolidated income accounts of Associated Oil Co. and proprietary companies compare:

	*1924	*1923	†1923	†1921	†1920
Operating income	$69,859,166	$66,093,690	$36,776,769	$49,610,133	$51,193,959
Other income	1,670,292	1,173,302	1,086,520	3,877,426	767,209
Gross revenue	$71,529,458	$67,266,992	$37,863,289	$53,487,559	$51,961,249
Expenses, federal taxes, deprec., etc.	65,124,128	61,316,309	33,672,721	45,329,607	43,153,531
Net profit	$ 6,405,330	$ 5,950,683	$ 4,190,568	$ 8,157,952	$ 8,807,718
Dividends	3,360,000	2,632,672	2,385,345	2,385,343	2,385,348
Surplus	$ 3,045,330	$ 3,318,011	$ 1,805,223	$ 5,772,609	$ 6,422,370

*Includes Amalgamated Oil.
†Excludes Amalgamated Oil.

Balance sheets of Associated Oil Co., and proprietary companies as of Dec. 31, compare:

ASSETS

	1924	1923	1922	1921	1920
Real Estate	$40,518,002	$34,534,563	$33,232,584	$31,574,538	$31,761,292
Improvements	62,131,924	59,640,679	41,982,841	38,649,371	36,420,498
Stocks and Bonds	12,317,280	12,043,472	9,760,858	9,472,627	10,249,477
Due from affil. cos	4,748,809	4,081,024	4,455,686	4,605,816	698,167
Sinking funds	.....	1,258	924,774	924,760	915,929
Other investments	682,309	.....	.....	.....	.....
Total property	$120,398,325	$110,300,996	$90,356,743	$85,227,012	$80,045,363
Deprec. and deplet	39,377,996	30,649,928	24,578,961	.....	.....
Net property	$81,060,329	$79,651,068	$65,777,782	$85,227,112	$80,045,363
Cash	4,300,824	4,749,731	1,157,491	962,876	748,547
Loans, accounts	8,723,871	8,801,379	3,612,713	3,282,095	4,058,191
Materials, supplies	3,564,558	3,550,382	2,863,278	2,838,985	2,979,183
Merchandise	15,488,978	16,264,726	7,329,995	5,069,154	6,188,013
Interest, rent due	7,515	9,358	3,463	7,155	6,964
Deferred assets	628,640	458,539	418,371	299,954	549,166
Unadjusted debits	3,161,298	3,306,767	1,146,671	2,445,886	2,015,247
Total	$116,936,015	$116,791,950	$82,310,765	$100,133,217	$96,590,674

LIABILITIES

Capital stock	$56,000,000	$56,000,000	$39,755,724	$39,755,756	$39,755,634
Funded debt	24,000,000	24,000,000	5,997,000	8,310,000	9,278,000
Loans, bills payable	750,000	2,633,000	4,105,000	.....	1,175,000
Accounts payble	2,429,904	2,873,494	2,068,102	3,284,450	1,820,233
Wages payable etc	5,216,884	5,031,530	4,131,860	1,338,537	2,813,286
Due affil. companies	1,033,500	1,547,000	3,236,000	1,793,750	130,550
Accrued interest, divs. etc	1,345,836	1,337,614	743,978	793,482	820,464
Deferred liabilities	238,380	216,670	626,110	99,801	1,431,758
Unadjusted credits	1,241,742	806,186	1,034,936	2,694,292	3,874,216
Deprec., depletion reserve	.....	.....	.....	21,997,851	19,973,296
Surplus	24,679,768	22,346,454	20,622,055	20,065,298	15,518,237
Total	$116,936,015	$116,791,950	$82,310,765	$100,133,217	$96,590,674

Income accounts of the Pacific Oil Co. of the last four years follow:

	1924	1923	1922	1921
Gross earnings	$23,448,932	$19,876,001	$21,422,005	$30,853,257
Operating expenses	9,821,341	8,806,340	7,222,671	11,204,604
Ord. taxes	1,161,148	1,233,900	990,152	822,507
Net profits	$12,466,443	$ 9,835,761	$13,209,182	$18,826,146
Other income, net	3,230,979	2,564,045	2,187,325	1,388,257
Total income	$15,697,422	$12,399,806	$15,396,507	$20,214,403
Depreciation and depletion reserve	3,133,850	2,904,579	3,094,975	3,153,111
Federal tax reserve	669,806	557,116	509,306	800,000
Balance	$11,893,766	$ 8,938,111	$11,792,226	$16,261,292
Dividends	7,000,000	7,000,000	10,500,000	10,500,000
Surplus	$ 4,893,766	$ 1,938,111	$ 1,292,226	$ 5,761,292

General balance sheets of the Pacific Oil Co., as of Dec. 31 follow:

ASSETS

	1924	1923	1922	1921
Field improv. and equipment	$27,477,004	$24,822,724	$23,422,467	$21,274,115
Associated Oil stock	32,209,554	32,199,508	32,214,973	35,171,369
Associated Pipe Line stock	.....	.....	.....	3,500,000
Inv. in and adv. to affil. cos	19,695,190	18,556,189	10,277,926	.....
Associated Oil advances	.....	.....	.....	1,793,750
Cash	10,276,768	6,618,044	3,899,775	790,819
Call loans	.....	.....	1,400,000	.....
Special deposits	.....	1,244,238	.....	3,793,242
Demand deposits	.....	.....	.....	2,000,000
Accounts and notes receivable	3,439,072	2,776,037	3,273,685	.....
Marketable securities	600,059	1,498,157	6,131,967	6,808,698
Miscellaneous accounts receivable	.....	.....	.....	3,388,724
Material and supplies	226,491	244,281	242,060	2,071,734
Crued oil on hand, or receivable, etc	792,902	433,457	438,386	199,739
Interest accrued	.....	.....	.....	90,245
Deferred assets	668,738	732,757	695,528	154,554
Unadjustable debits	.....	.....	.....	120,062
Total	$95,385,782	$89,125,392	$81,996,767	$81,157,051

LIABILITIES

Capital stock*	$52,500,000	$52,500,000	$52,500,000	$52,500,000
Accounts payable	1,681,127	1,844,348	718,456	394,338
Miscellaneous accounts payable	.....	.....	.....	3,501,716
Div. matured unpaid	.....	.....	.....	10,597
Unmatured div. dec	3,500,000	3,500,000	5,250,000	5,250,000
Other current liabilities	932,430	1,761,624	649,791	231,710
Deferred liabilities	432,880	256,723	30,539	4,831
Special liability	.....	1,244,238	.....	.....
Unadjusted credits	.....	.....	.....	915,576
Reserve for depr., depl, insurance and taxes	23,239,395	19,574,583	16,241,214	12,963,749
Profit and loss surplus	13,099,999	8,443,876	6,606,767	5,384,534
Total	$95,385,782	$89,125,392	$81,996,767	$81,157,051

*Represented by 3,500,000 shares of no par value.

Transactions In Oil Shares on New York Stock Exchange

1924 High	1924 Low	1925 High	1925 Low		Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended Aug. 8 Sales	First	High	Low	Last	Ch'ge
48	25	76	48	(sh)	200,000	N.P.	American Republics	.....	.....	900	62⅝	62⅝	60	60	—2
34⅛	27⅝	41⅜	32	$	56,000,000	$25	Associated Oil	50cQ	July 25, 25	8,700	38½	39⅛	38	38	— ⅛
140⅛	78⅛	117½	95⅛		50,000,000	100	Atlantic Refining	.....	June 16, 24	2,300	112	112	109½	109¾	—1⅜
118	108	117¾	113½		20,000,000	100	do pfd	$1¾Q	Aug. 1, 25	.....	.....	.....	.....	.....	.....
23½	14	30	20¼		18,428,350	25	Barnsdall Corp. A	.....	Apr. 30, 21	12,300	21½	21¾	†20¾	21⅛	— ¼
17½	10	23	16¼		5,713,275	25	do B	.....	Apr. 30, 21	900	17	17	16⅜	17	0
4¼	1	2⅜	½	(sh)	150,000	N.P.	Caddo Central O. & R	.....	.....	800	¾	⅞	¾	¾	0
29¼	19½	32⅞	25⅞	$	30,549,925	$25	California Petroleum	43¾cQ	June 1, 25	25,800	28⅜	28½	27¼	28	— ⅛
63⅜	31⅜	62¾	42½		19,832,100	100	General Asphalt Co	.....	.....	16,300	56¾	57¾	54½	54⅝	—1⅜
100	71½	100	86⅝		7,416,000	100	do pfd	$1¾Q	June 1, 25	300	95⅞	97	95⅞	96⅞	+ ⅜
45	38¾	59	42		28,909,550	25	General Petroleum	50cQ	June 15, 25	30,500	52⅞	52⅞	49⅞	50⅜	—2⅜
82½	61	85	59		25,000,000	100	Houston Oil Co	.....	.....	3,100	69	69	66	66¼	—1¾
16¼	5¾	40½	13½	(sh)	450,000	N.P.	Independent Oil & Gas	25cQ	July 1, 25	64,800	32¾	32¾	25¾	25¾	—7⅛
7⅛	3¾	10¾	5½	$	7,830,450	10	Indian Refining Co	.....	Dec. 15, 20	600	7⅝	7⅝	7½	7½	— ⅛
75	60	95	77		2,296,400	100	do pfd	.....	Dec. 15, 21	200	85	85	83	83	—2
1	¼	1⅜	¼		1,678,760	$10	Kansas & Gulf Corp	.....	.....	200	⅝	⅝	*½	½	— ⅛
.....	.....	23¾	14⅛	(sh)	1,074,631	N.P.	Louisiana Oil Refining	.....	.....	7,200	16	16⅜	15½	15⅝	— ⅜
37½	24⅝	35½	23⅜	(sh)	330,000	N.P.	Maracaibo Oil	.....	.....	6,500	25½	25½	†23⅛	23⅜	—2⅜
42	29	47⅜	32⅜	(sh)	1,734,861	N.P.	Marland Oil Co	.....	July 1, 25	97,900	46	46	43¼	44	—2
190	190	250	225	$	45,942,800	$100	Mexican Petroleum Co	83Q	July 20, 25	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....		12,000,000	$100	do pfd	$2Q	July 20, 25	.....	.....	.....	.....	.....	.....
25¾	14⅛	22¾	11⅝	(sh)	945,989	N.P.	Mexican Seaboard Oil	.....	Nov. 15, 24	3,700	13	13	12½	13	+ ½
40¼	22⅝	36	26	(sh)	1,357,800	N.P.	Mid-Continent Petroleum (Cosden)	.....	Aug. 1, 23	26,100	31⅝	31½	28⅝	28¾	—2¾
95	80	94	88	$	6,718,000	$100	do pfd	$1¾Q	June 1, 25	400	92	92	92	92	0
6⅞	1	3¼	⅝	$	26,013,700	$10	Middle States Oil Corp	.....	July 1, 23	9,300	2	2	1⅞	2	0
58¼	45	65¼	52¼	(sh)	3,500,000	N.P.	Pacific Oil Co	$1.50S.A.	July 20, 25	28,600	55¾	56	54¾	55	— ¾
65	44¼	83⅞	64	$	48,307,400	$50	Pan American P. & T	$1.50Q	July 20, 25	34,000	70⅜	71	66¾	67¾	—2½
64⅝	41¾	84½	63¾		90,475,100	50	do Class B	$1.50Q	July 20, 25	107,800	71½	71⅝	66½	68¼	—1¾
4⅝	1⅝	5⅝	3	(sh)	198,770	N.P.	Panhandle P. & R	.....	.....	500	3⅜	3⅜	3¼	2⅞	— ⅜
42½	29	60½	43	$	2,935,200	$100	do pfd	.....	July 2, 23	300	49	49	47	47	—3¼
42½	28½	47⅝	36¼	(sh)	1,924,952	N.P.	Phillips Petroleum	50cQ	July 1, 25	46,200	43⅜	43⅜	40	40	—3
4½	1½	3⅝	1¾	$	29,622,925	$25	Pierce Oil Corp	.....	.....	3,400	1¾	2	1¾	1¾	0
36	20	40	25½		15,000,000	100	do pfd	.....	Feb. 1, 22	100	30¼	32	30¼	32	— ⅛
5¾	4⅜	8½	5⅜	(sh)	2,500,000	N.P.	Pierce Petroleum	.....	.....	5,100	6	6⅛	5¾	6	— ⅛
48½	22¾	32⅝	15⅛	$	11,467,850	50	Producers & Refiners	.....	Sept. 15, 23	5,000	16¾	16¾	†15⅛	15¾	—1¼
47½	42	47¾	41		2,845,350	50	do pfd	.....	May 1, 25	300	34⅞	34⅞	34¼	34½	—5
30¼	20	33¾	25¾		75,959,250	25	Pure Oil Co	37½cQ	June 1, 25	7,200	27¾	28¼	27	26⅞	—1⅜
105¼	92	108	103		13,000,000	100	do 8% pfd	$2Q	July 1, 25	.....	.....	.....	.....	.....	.....
59½	40¾	57⅜	48¼	(sh)	823,298	13.40	Royal Dutch, N. Y. shares	$3.18⅓	Aug. 12, 24	6,000	51⅞	51⅞	50½	51	— ½
42	33	45¾	39¾	(sh)	111,273	£2	Shell Transport & T	$1.21	July 25, 25	100	41¾	41¾	41¾	41¾	+ ⅛
22½	15¾	28⅜	22¼	(sh)	10,000,000	N.P.	Shell Union Oil Corp	25cQ	June 30, 25	30,200	23¾	23⅝	†22¼	22⅝	— ⅛
99½	91½	105⅜	99½	$	20,000,000	$100	do pfd	$1½Q	Aug. 15, 25	200	102	102	102	102	— ½
24	10⅜	26¾	19½		7,207,090	10	Simms Petroleum Co	50Q	July 1, 25	7,100	23	23⅜	21⅞	21⅞	—1¼
27⅛	15	24⅞	17	(sh)	4,484,305	N.P.	Sinclair Consolidated	.....	May 31, 24	53,500	20¾	21¼	19⅞	19⅞	—1⅜
90	75	94⅛	78¾	$	18,190,200	$100	do pfd	$2Q	Aug. 15, 25	100	91½	91½	91½	91½	— ½
29	17⅛	30½	21¾		20,966,590	25	Skelly Oil Co	.....	.....	10,600	25⅝	25⅝	23⅞	23⅞	—1⅝
68½	55½	67¾	55¾		236,209,000	25	S. O. California	50cQ	June 15, 25	26,100	57⅜	57⅜	†55⅜	55¼	—2¼
42¾	33	47⅜	38⅜		510,356,025	25	S. O. New Jersey	25cQ	June 15, 25	37,700	42¾	42¾	40⅝	41½	—1⅜
119⅛	115¾	119	116¾		199,972,900	100	do pfd	$1¾Q	June 15, 25	2,500	117	117⅜	117	117½	+ ¾
8¼	2⅜	6¼	3¾	(sh)	1,121,268	N.P.	Superior Oil Corp	.....	Dec. 20, 20	900	3¾	3¾	3¾	3¾	— ⅛
45¾	37¾	53	42¾	$	164,450,000	$25	The Texas Co	75cQ	June 30, 25	70,800	51¾	51¾	48¾	49	—2⅜
15¼	8	23¾	11½		8,380,340	10	Texas Pacific Coal & Oil	.....	June 30, 25	9,100	13½	13¾	13	13½	— ⅜
151	116¾	152	122		50,442,900	100	Tide Water Oil Co	$1Q	June 30, 25	.....	.....	.....	.....	.....	.....
.....	.....	36¾	31½	(sh)	16,590,000	N.P.	do new	.....	.....	1,200	33	33	†31½	32½	— ⅛
6¼	3¾	5⅞	3⅛	(sh)	3,742,029	N.P.	Transcontinental Oil Co	.....	.....	35,500	4¾	4⅞	4½	4⅜	— ⅛
39	35	43⅜	36⅜	$	40,480,800	$25	Union Oil of California	45cQ	Aug. 10, 25	12,200	37	37½	36¼	36¼	— ⅜
132⅞	94	134	118½		18,115,000	$100	Union Tank Car Co	$1¾Q	June 1, 25	400	125½	127	125½	126½	+1½
116¾	106⅛	117⅜	113¾		12,000,000	100	do pfd	$1¾Q	June 1, 25	100	116⅜	116¾	116⅜	116¾	+ ⅛
29¾	23⅛	31¾	25⅝	(sh)	490,000	N.P.	White Eagle Oil & Ref	50cQ	July 20, 25	4,100	27⅛	27⅝	26¼	26¼	— ⅜

*New High †New Low xEx-Dividend Total Sales 863,700

Standard Oil Stock Traded In New York Curb Market

1924 High	1924 Low	1925 High	1925 Low		Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended Aug. 7 Sales	First	High	Low	Last	Ch'ge
18¼	14¾	26¾	18	£	3,000,000	£1	Anglo American	45cS.A.	Nov. 15, 24	3,100	23	23¼	23	23¼	+ ⅛
4⅞	2	4	2	(sh)	500,000	N.P.	Atlantic Lobos	.....	.....	700	....	2¾	2¼	2¼	— ⅛
16	5	12¾	8¾	$	10,000,000	$10	do pfd	.....	.....	700	4	4	3⅜	3⅜	.....
165	155	240½	205		1,000,000	$100	Borne-Scrymser	$24S.A.	Apr. 15, 25	20	....	223	223	223	—4
85½	51	72	59⅜		10,000,000	50	Buckeye Pipe Line	$1Q	June 15, 25	180	....	60¼	60	60	.....
52½	47⅜	70	48½		3,000,000	25	Chesebrough Mfg. Co	62½cQ	June 30, 25	500	....	63½	63	63	—1½
115	112	115	110		1,000,000	100	do pfd	$1¾Q	June 30, 25	.....	.....	.....	.....	.....	.....
.....	.....	31¾	21¾		30,208,590	$10	Continental Oil (Maine)	25cQ	June 15, 25	3,680	23⅞	24⅛	23¼	24	— ⅛
20	11¾	17	10¾		1,500,000	25	Crescent Pipe Line	.....	Sept. 15, 23	300	....	15½	15¼	15¼	....
149	110¾	156	132		3,000,000	100	Cumberland Pipe Line	$3Q	June 15, 25	.....	.....	.....	.....	.....	.....
105	74	96	72		5,000,000	100	Eureka Pipe Line	$1Q	Aug. 1, 25	90	....	73	72½	73	+ ½
69¾	52	65	53		16,000,000	100	Galena Signal Oil	$1Q	June 30, 25	500	53	52	46½	46½	—7½
113	100½	105	100		4,000,000	100	do new pfd	$2Q	June 30, 25	10	....	101	101	101	— ½
116	110	114	105		2,000,000	100	do old pfd	$2Q	June 30, 25	.....	.....	.....	.....	.....	.....
43¾	34½	72½	42¾		48,750,000	25	Humble Oil & Ref	30cQ	July 1, 25	27,800	62⅝	65¼	60⅝	61¾	— ⅝
161	120	154½	127		20,000,000	100	Illinois Pipe Line	$6S.A.	June 30, 25	270	....	136	133	133	—3
.....	.....	34¾	27¾	(sh)	6,275,640	N.P.	Imperial New w.i	25cQ	June 1, 25	6,700	31	31½	30½	30¾	— ⅛
100	66	84	67	$	5,000,000	50	Indiana Pipe Line	$1Q	Aug. 15, 25	240	....	70	67	70	....
24¾	16¾	28¾	22½	(sh)	7,118,138	N.P.	International Petroleum	25c	Apr. 30, 25	39,700	24¾	25	23½	23⅞	— ⅛
182	122	159	130½	$	180,247,100	100	Magnolia Petroleum	$1Q	July 5, 25	500	145½	148	142	142	—4
25⅞	20¾	25⅝	21		6,362,500	12½	National Transit	50cQ	June 15, 25	200	21⅛	21⅛	21	21	— ½
97	54½	79	55		5,000,000	100	New York Transit	75cQ	July 15, 25	10,000	....	55	55	55	—2
107½	72	88	78		4,000,000	100	Northern Pipe Line	$3S.A.	July 1, 25	70	82	83	81	81	—2
79½	55	75	62		60,000,000	25	Ohio Oil Co	50cQ	June 30, 25	3,200	65	63¾	62	63¼	— ¾
48	27	44⅜	24⅞		10,000,000	25	Penn.-Mex. Fuel	50c	May 21, 25	.....	.....	.....	.....	.....	.....
54¾	49½	65⅜	50¾		60,000,000	25	Prairie O. & G	50cQ	July 31, 25	10,850	56¾	56¾	54¼	55	— ¼
111	100	127½	106		81,000,000	100	Prairie Pipe Line	$2Q	July 31, 25	1,300	125	126	125	125	....
230	175	259	200		4,000,000	100	Solar Refining Co	$5S.A.	June 20, 24	40	....	220	212	215	—8½
100	80½	103	29		10,000,000	100	Southern Pipe Line Co	$1Q	June 1, 25	90	....	81	79	79	—2
171	117	197	139		20,000,000	100	South Penn Oil Co	.....	Sept. 30, 22	1,140	169¾	189½	168	168	—1
89	68	84	65		3,500,000	100	Southwest Pa. Pipe Lines	$1Q	July 1, 25	50	....	66	66	66	—1
68¾	54¼	70	59½		223,756,258	25	S. O. Indiana	62½cQ	June 15, 25	44,400	63⅝	64¼	62¼	62⅝	— ⅜
50¼	32½	46	30½		8,000,000	25	S. O. Kansas	.....	June 16, 24	1,400	....	34¼	33⅛	33⅛	— ⅛
121¼	101	126	114¾		16,864,434	25	S. O. Kentucky	$1Q	June 30, 25	2,500	124½	125⅛	123⅞	124½	— ⅛
202	198	270	240		3,000,000	100	S. O. Nebraska	$5S.A.	June 20, 24	80	....	247	241½	243	—3
48	37¾	48⅝	41		225,324,650	25	S. O. New York	35cQ	June 15, 25	9,500	42⅜	43⅛	41⅛	41⅞	— ⅛
377½	275	369	338		14,000,000	100	S. O. Ohio	$2½Q	July 1, 25	190	354	354	351½	352	—2
136	115	125	117		7,000,000	100	do pfd	$1¾Q	June 1, 25	20	....	117¾	117¾	117¾	+ ¾
81	20	27	15		1,722,931	25	Swan-Finch Oil Corp	.....	Nov. 1, 19	100	....	16	16	16	— ¼
83½	56½	96¾	80¼		61,523,075	25	Vacuum Oil Co	‡50cQ	June 20, 25	5,100	87½	89	86½	87¼	— ¼
30	25	35	30		100,000	10	Washington Oil Co	.....	Jan. 31, 22	10	....	35	35	35	+ 2

†Borne Scrymser $2 extra April 15 ‡Vacuum 50c extra Mar. 20 and June 20

(Continued from preceding page)

valley fields compared with 595 wells on Jan. 31, 1923. Nine new wells were being drilled at the end of the year and 13 wells were being redrilled in those fields.

The gross production of the Associated Oil Co. and its affiliated companies during the year was 15,361,858 barrels, a decrease of 7,627,631 barrels from the 1923 production. The company developed jointly with the Pacific a daily production of 7200 barrels by March 15, this year, in the Dominguez field and 1400 in the Rosecrans field. The Associated's stocks of crude and refined oils on Dec. 31 totaled 13,159,462 barrels.

Sales of refined produced during 1924 totaled 34,934,119 barrels, an increase of 61 per cent over 1923. Sales of crude and fuel oils were almost the same as in 1923.

During the year $3,138,559 was spent in improvements to the refining and distributing equipment. Nineteen service and bulk stations were added, giving the company 176 service stations and 54 bulk plants at the end of the year. Distributing equipment included 500 trucks and 411 other motor vehicles.

During the year 4240 acres were acquired in the San Joaquin valley fields and 4188 acres in southern California, of which total 2665 acres were acquired jointly with the Pacific Oil Co. Drilling and other field development cost $4,016,615. The 23 wells completed were distributed as follows: Midway 5, Elk Hills 4, Coyote 1, Huntington Beach 1, Redondo 4, Sante Fe Springs 3, and Ventura 5. On joint account with the Pacific it drilled 2 wells in the Rosecrans field, 4 at Dominguez, and 5 in Texas. Among the wells drilling at the end of the year was one in Alaska.

Miley-Keck Oil Co. in which Associated has a 56.6 per cent interest, produced 2,064,003 barrels of crude last year, a decrease of 2,416,602 barrels from the 1923 production.

Reward Oil Co., 55.56 per cent owned by Associated, produced 347,497 barrels, decrease of 41,120 barrels.

Sterling Oil & Development Co., owned 70.07 per cent by Associated, produced 239,845, a decrease of 28,159 barrels.

West Coast Oil Co., 60.4 per cent owned by Associated, produced 466,054 barrels, decrease of 22,732 barrels.

In the first quarter of 1925, Pacific Oil Co. netted $1.16 a share, a gain of 33 cents a share over the first quarter of 1924.

Oil Dividends

	Amount	Payable	Stock of Record
General Pet. q....	50c	Sept. 15	Aug. 31
do pfd. q.....	43¾c	Sept. 1	Aug. 15
Imperial q.....	25c	Sept. 1	Aug. 15
S. O. Indiana q...	62½c	Sept. 15	Aug. 15
Vacuum Oil q....	50c	Sept. 19	Aug. 31
do extra.....	50c	Sept. 19	Aug. 31

New York Curb Bonds

Week Ended August 8, 1925

	High	Low	Last	Change
Cities Serv. 6s.....	91	90½	90½	— ½
do 7s C.....	124⅞	123¾	124	— ½
do 7s D.....	103⅜	102¼	102½	+ ¼
Galena S. O. 7s.....	104¾	104½	104½	— ¼
Gen. Petr. 6s.....	101½	101½	101½	0
Gulf Oil 5s.....	99¾	99¾	99¾	0
do 5½s '28.....	101	101	101	0
Pure Oil 6½s.....	101	100½	101⅜	+ ⅜
S. O. of N. Y. 6½s....	106¼	106	106	— ½
Sun Oil 5½s.....	97½	97⅛	97⅜	—1⅜
Tidal Osage 7s.....	103¾	103	103	— ½
Transcon. Oil 7s.....	99⅞	98	98	—1½
Union Oil Calif. do 5s.	95	95	95	— ¾
Vacuum Oil 7s.....	105½	105⅛	105½	+ ⅜

New York Bonds

Week Ended August 8, 1925

	High	Low	Last	Change
Associated Oil Co. Gold 6s.....	102⅞	102¾	102⅞	+ ¼
Atlantic Refg. debs 5s.	99¾	99½	99⅝	— ⅛
Barnsdall Corp. 8s....	105½	105⅜	105½	+ ⅛
Calif. Petr. s. f. 6½s..	104¾	103	104	+ ½
Empire Gas & Fuel 7½s.....	104½	103½	104½	0
Gen. Asphalt 6s.....	103⅞	103¾	103¾	+ ¼
Humble O. & R. 5½s	101⅜	101¼	101¼	— ⅛
Med.-Con. Petr. 6½s .	99	98¼	98½	— ¼
Pan Amer. Petr. & Trans. 6s.....	108	106	106¾	— ⅜
do 7s.....	105½	105	105	0
Pierce Oil debs 8s.....	106⅛	106	106	— ¼
Prod. & Refrs. 8s.....	110⅞	110⅞	110⅞	0
Sinclair Con. 7s.....	92½	91⅝	91¾	—1¼
do 6s.....	108¾	106⅜	106¾	—2⅛
do 6½s.....	88¾	87⅜	87¾	— ½
Sinclair Crude 6s.....	100½	100	100⅜	0
Sinclair P. L. s. f. 5s...	86¼	85⅝	85⅝	— ⅜
Skelly Oil 6½s.....	110½	109	109¼	—1¼
Tidewater Oil 6½s....	102	101⅜	101¾	0
Union Oil Calif. 6s....	104¼	104¼	104¼	0

New York Curb Market

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions week ended Aug. 7 Sales	First	High	Low	Last	Ch'ge
.....	.....	11⅜	2½	....	Amer. Maracaibo...	17,700	10¼	10½	10	10⅛	— ⅛
7	4	8⅜	5	$10	Ark. Nt. Gas.....	200	6	6	6	6	+ ⅛
6⅝	2¾	6¾	2¾	25c	Carib. Synd.....	63,300	5⅞	7½	5	6¾	+ ¾
190	132	212	175	$100	Cities Service.....	.....	.....	.....	.....	.....	.....
.....	.....	40	35	20	do new.....	17,900	39½	*40	39¼	39⅝	+ ⅛
82⅞	67¾	84	80¼	100	do pfd.....	2,100	83¾	*84	83¾	84	+ ⅛
7¾	6⅜	8	7¼	10	do pfd. B.....	500	7¾	*8	7¾	8	+ ¼
19	13¼	21⅜	17½	10	do Bkrs. Sh.....	.....	.....	.....	.....	.....	.....
10⅝	2¼	13⅝	8¼	N.P.	Creole Synd.....	27,400	11⅞	12¾	11	11¾	— ⅛
8	1½	7	3½	N.P.	Derby Oil & Ref...	300	4⅝	4⅝	4⅛	4⅝	+1⅛
34¼	17½	27	20⅞	N.P.	do pfd.....	.....	.....	.....	.....	.....	.....
.60	.12	.25	.18	$5	Federal Oil.....	.....	.....	.....	.....	.....	.....
.....	.....	3¾	1¾	N.P.	Gilliland v.t.c.....	100	1⅞	1⅞	1⅞	1⅞	— ⅛
.60	.15	.29	.14	$10	Glenrock.....	1,000	.14	.14	†.14	.14	—04
67⅜	56	79	63½	25	Gulf Oil Corp.....	4,000	76½	76¾	74	74	—1½
7	1⅛	5⅞	2¾	N.P.	Kirby Petroleum...	900	2¾	3	2¾	2⅞	0
6¼	2⅜	7¼	4⅝	N.P.	Lago Petroleum....	65,000	5	5⅜	4⅞	5¼	+ ¼
4⅞	1⅜	4¼	1¾	N.P.	Marland of Mexico	100	3½	3½	3½	3½	0
.....	.....	2	1⅛	$1	Mountain & Gulf..	1,600	1½	1½	1½	1½	0
20¾	16	23¾	18⅜	10	Mountain Prod....	2,100	21	21	20⅜	20¾	— ¼
14	9½	14⅜	11⅞	5	Mutual Oil ctfs....	1,900	5⅝	5⅝	5½	5½	0
6¼	3⅛	6⅜	3⅝	5	New Bradford Oil..	100	5¾	5¾	5¾	5¾	+ ⅛
44	17	24¾	16¼	10	New England Fuel.	.....	.....	.....	.....	.....	.....
14	8⅛	12⅜	8¼	25	New York Oil.....	200	14	14	14	14	—1½
33⅛	29¾	33¾	31⅝	25	Ohio Fuel Corp....	2,100	1	1¼	1	1⅛	— ⅛
6	.70	1¾	.90	N.P.	Peer Oil Corp.....	1,900	24⅛	25½	23¾	23⅜	— ⅜
18¼	12¼	28¾	16	10	Pennok Oil.....	2,700	33½	34½	31¼	34	0
57¾	5¾	44⅜	18¾	25	Red Bank Oil.....	1,900	4½	4½	4⅛	4¼	— ⅛
5½	3	9½	3½	N.P.	Ryan Consolidated.	1,300	7⅛	7½	7	7	— ¼
10¼	6	8⅝	6½	10	Salt Creek Cons...	.....	.....	.....	.....	.....	.....
27½	19⅛	28⅛	24	10	Salt Creek Prod...	100	1¼	1¼	1¼	1¼	0
2⅜	.80	2	1	5	Sapulpa Refining...	.....	.....	.....	.....	.....	.....
16¼	6¼	13¾	8	10	Tidal Osage.....	3,300	3⅜	3¾	3½	3½	— ⅛
4⅛	2⅜	4⅞	3¾	5	Venezuelan Pet....	.....	.....	.....	.....	.....	.....
8½	4¼	7¾	5¾	5	Wilcox Oil & Gas..	1,000	27⅞	28	27	27½	— ½
15⅞	4¾	7	3¾	N.P.	Woodley Petroleum	700	4¾	5⅛	4¾	5⅛	— ⅛

Pittsburgh Stock Exchange

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions Week Ended Aug. 7 Sales	First	High	Low	Last	Ch'ge
7	4	8⅛	5¼	$10	Arkansas Nat. Gas....	865	5⅞	6	5⅞	6	+ ⅛
40½	35¾	73¼	69¼	N.P.	Columbia Gas.....	110	71	*73¼	71	73¼	+4
.....	.....	111	105¾	$100	Duquesne Lt. 7s pfd..	50	110½	111	110½	111	+ ½
30	30	110½	90	25	Fayette County Gas..	.....	.....	.....	.....	.....	.....
33½	26½	43	32¾	25	Lone Star Gas.....	1,805	40¾	41	40½	41	0
33¼	28½	34½	31	25	Ohio Fuel Corp.....	1,460	33	33	32¾	33	+ ¼
16½	11⅛	16¾	12⅛	1	Ohio Fuel Oil.....	365	14¾	15	14½	14½	0
28½	22¾	31½	26	25	Oklahoma Nat. Gas...	527	29¾	29⅞	29¼	29¼	0
9¾	6	8¾	6	5	Pittsburgh O. & G....	.....	.....	.....	.....	.....	.....
10½	6	8½	6¾	10	Salt Creek Cons.....	2,012	7⅛	7¼	7	7¼	0
16½	8	13⅜	8¾	10	Tidal Osage.....	75	9½	10	9½	10	.....
92	92	.....	.....	100	do pfd.....	.....	.....	.....	.....	.....	.....

Pittsburgh Curb Market

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions Week Ended Aug. 7 Sales	First	High	Low	Last	Ch'ge
2½	2½	.....	.....	N.P.	Arkansas Fuel.....	.....	.....	.....	.....	.....	.....
1	.20	2½	.60	$5	Colombia Synd.....	.....	.....	.....	.....	.....	.....
.....	.....	14	13	N.P.	Devonian Oil.....	52	14	14	14	14	0
.70	.25	.60	.15	5	Duquesne Oil.....	.....	.....	.....	.....	.....	.....
9½	5½	9	5½	10	Forest Oil.....	.....	.....	.....	.....	.....	.....
66¾	57	78½	64	25	Gulf Oil Corp.....	700	75	75	74	75	.....
23¾	21	.....	.....	N.P.	International Pet.....	.....	.....	.....	.....	.....	.....
4½	4½	.....	.....	N.P.	Lago Petroleum.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	N.P.	Leonard Oil & Dvlp...	6,050	3½	3½	3½	3½	0
6	5	.....	.....	$10	Marshall Oil.....	.....	.....	.....	.....	.....	.....
2⅞	1½	2¾	1¾	1	Oklahoma Eastern....	.....	.....	.....	.....	.....	.....
.77	.35	.47	.33	10	Omar O. & G.....	.....	.....	.....	.....	.....	.....
8	8¾	7	8	5	States Oil.....	.....	.....	.....	.....	.....	.....
.....	.....	2¾	2	$1	Texon Oil & Land....	3,100	2⅜	2⅜	2	2	— ⅛
14	10	11	9	10	Tidal Osage non-vot'g.	200	9	9	9	9	— ½

*New High †New Low xEx-Dividend